

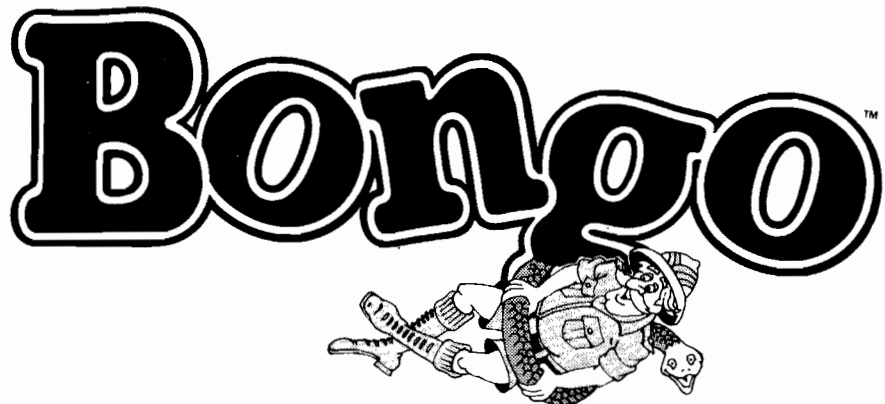
# Congo Bongo™



Owner's Manual  
Manual Part No. 420-0979

**SEGA**<sup>®</sup>  
THE ARCADE EXPERTS





## Owner's Manual

Manufactured By

**SEGA**<sup>®</sup>

TLX 910-335-1621

**Congo Bongo<sup>™</sup> Owner's Manual**

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## Introduction

CONGO BONGO™ is a micro-processor based coin-operated electronic game, that makes extensive use of digital integrated circuitry and television monitor concepts. This manual is intended for the use of maintenance technicians who possess a general working knowledge of solid-state circuitry and video monitor theory. Any individual NOT knowledgeable in these areas SHOULD NOT attempt repair of the electronic portions of the game.

In addition to this manual and training in electronics, troubleshooting and repair will be facilitated by: access to general electronic type handtools, a multimeter, a 50 to 100 MHz oscilloscope and a logic probe would be helpful.

Technical assistance is available toll-free by calling:

1-800-854-1938 outside California

1-800-722-8576 inside California

Parts Information assistance is available toll-free by calling:

1-800-854-1900 outside California

1-800-722-8575 inside California

Questions or comments concerning CONGO BONGO™ or any of our games are welcome and should be directed to:

Customer Service Manager

SEGA Electronics, Inc.

16250 Technology Drive

San Diego, California 92127-1985

## Important Notes

The following note is included in compliance with FCC rules:

WARNING: This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

## Other Notes

NEVER replace any components with anything other than exact replacement parts.

NEVER remove circuit board connections while power is on.

DO NOT replace fuses with anything other than the proper value. A blown fuse indicates an overload condition within the game. Replacing fuses with a higher value can cause severe damage to internal components if an overload occurs.

ALWAYS consult the manual before attempting repairs.

SPARE PARTS will be maintained at SEGA Electronics, Inc. for a period of five (5) years after the date of manufacture of the game concerned.

## Game Concept

Jungle drums pound as CONGO BONGO™, the cartoon adventure that pits man against monkey, takes you on the craziest, most action-packed safari ever! With fantastic 3-dimensional-like graphics and wonderful native sounds, SEGA's CONGO BONGO lures explorers of all ages to chase Bongo, the mischievous gorilla, through four vivid scenes of jungle fun. By use of an 8-way joystick and a jump button, the player maneuvers his hunter through the various scenes and avoids obstacles and dangers in his path.

In the first scene, Bongo roars defiantly from the top of Steep Peak as the hunter approaches. The hunter must climb the treacherous cliffside to reach the bridge above, while avoiding the bouncing coconuts Bongo throws down. Once across the bridge, the hunter must slide down a slope and knock the green monkey off the ledge. Green monkeys will block the hunter's path and if not pushed over a cliff or jumped over, the hunter cannot pass.

Next the hunter must jump over a perilous, collapsing chasm and climb the cliff to Primate Plateau. Here several friendly-looking monkeys scamper about playfully. Be careful though, as the cheerful chimps will cling to the hunter, slowing him down. By using the jump button, the player can shake the chimps off the hunter, but it must be done quickly, because if three chimps grab the hunter, they will pick the hunter up and throw him over the side and into the river. Once past the monkeys, the hunter must jump the river again and climb up to the top where a chagrined Bongo loses his smile and runs off into the jungle.

In the second scene, Bongo taunts the hunter from across Snake Lake. Immediately scorpions descend upon the hunter and he must decide which route to take quickly. Snake Lake is a maze of bridges and islands with snakes guarding every route. The hunter must avoid the snakes by jumping over them. The hunter should attempt to reach the island nearest Bongo and jump onto the back of the hippo and then safely to shore. Beware of the hippo as he dives and surfaces. Once safely to shore, Bongo gets worried and scampers off again.

The third scene opens with the hunter in a mole hole on Rhino Ridge. A herd of charging rhinos must be avoided in the hunter's attempt to capture Bongo. The hunter can avoid the rhinos by jumping over them or ducking into a mole hole. When ducking into a mole hole, the player must depress the jump button for the hunter to duck down and avoid the rhinos.



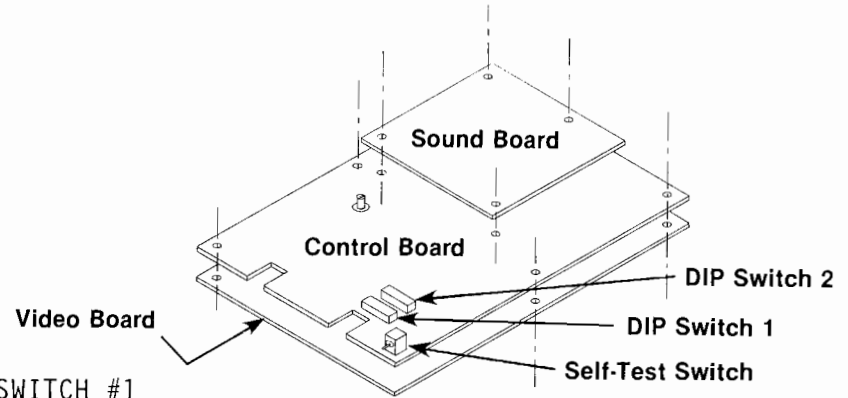
In the fourth scene, a weary Bongo naps in a chair on the far side of Lazy Lagoon. To reach Bongo, the hunter must cross Lazy Lagoon by jumping on lily pads, hippos and fish, that might sink at minute. Once across Lazy Lagoon, the hunter must dodge the last charging rhinos and climb the last bluff to capture Bongo. After Bongo is captured, the scenes repeat with increasing difficulty.

CONGO BONGO is a one or two player game with players alternating at the loss of each hunter. Each scene is timed by the bonus counter in the upper left corner of the screen. As time passes, the bonus decreases. If the bonus counter reaches zero, the player loses that hunter, the bonus counter is reset and play continues if he has other hunters available. Game ends with the loss of the last hunter.

### Scoring

|  | <u>POINTS</u> |
|--|---------------|
| EACH STEP TAKEN  | 10            |
| JUMPING ONTO HIPPO, FISH OR LILY PAD<br>(INCREASES BY 50 EACH ROUND)   | 100           |
| JUMPING INTO A MOLE HOLE   | 1000          |
| JUMPING ACROSS A CHASM   | 500           |
| AT THE SUCCESSFUL COMPLETION OF EACH ROUND, THE PLAYER IS AWARDED THE NUMBER OF POINTS REMAINING IN THE BONUS BOX. |               |

## Option Selection



| OPTION           | SWITCH #1 |     |     |     |     |     |     |     |
|------------------|-----------|-----|-----|-----|-----|-----|-----|-----|
|                  | 1         | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
| UPRIGHT          | X         | X   | X   | X   | X   | X   | X   | OFF |
| TABLE            | X         | X   | X   | X   | X   | X   | X   | ON  |
| SOUND ON         | X         | X   | X   | X   | X   | X   | ON  | X   |
| SOUND OFF        | X         | X   | X   | X   | X   | X   | OFF | X   |
| FREE PLAY        | X         | X   | X   | X   | OFF | OFF | X   | X   |
| 5 EXTRA HUNTERS  | X         | X   | X   | X   | OFF | ON  | X   | X   |
| 4 EXTRA HUNTERS  | X         | X   | X   | X   | ON  | OFF | X   | X   |
| 3 EXTRA HUNTERS  | X         | X   | X   | X   | ON  | ON  | X   | X   |
| DIFFICULTY: EASY | X         | X   | ON  | ON  | X   | X   | X   | X   |
| MEDIUM           | X         | X   | ON  | OFF | X   | X   | X   | X   |
| HARD             | X         | X   | OFF | ON  | X   | X   | X   | X   |
| HARDEST          | X         | X   | OFF | OFF | X   | X   | X   | X   |
| BONUS AT: 10,000 | ON        | ON  | X   | X   | X   | X   | X   | X   |
| 20,000           | ON        | OFF | X   | X   | X   | X   | X   | X   |
| 30,000           | OFF       | ON  | X   | X   | X   | X   | X   | X   |
| 40,000           | OFF       | OFF | X   | X   | X   | X   | X   | X   |

| OPTION           | SWITCH #2 |     |     |     |     |     |     |     |
|------------------|-----------|-----|-----|-----|-----|-----|-----|-----|
|                  | 1         | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
| 4 COINS 1 CREDIT | ON        | ON  | ON  | ON  | ON  | ON  | ON  | ON  |
| 3 COINS 1 CREDIT | ON        | ON  | ON  | OFF | ON  | ON  | ON  | OFF |
| 2 COINS 1 CREDIT | ON        | ON  | OFF | ON  | ON  | ON  | OFF | ON  |
| 1 COIN 1 CREDIT  | ON        | ON  | OFF | OFF | ON  | ON  | OFF | OFF |
| 1 COIN 2 CREDITS | ON        | OFF | ON  | ON  | ON  | OFF | ON  | ON  |
| 1 COIN 3 CREDITS | ON        | OFF | ON  | OFF | ON  | OFF | ON  | OFF |
| 1 COIN 4 CREDITS | ON        | OFF | OFF | ON  | ON  | OFF | OFF | ON  |
| 1 COIN 5 CREDITS | ON        | OFF | OFF | OFF | ON  | OFF | OFF | OFF |
| 1 COIN 6 CREDITS | OFF       | ON  | ON  | ON  | OFF | ON  | ON  | ON  |

OPTION SELECTION (cont.)

| OPTION  |            | SWITCH #2 |     |     |     |     |     |     |     |
|---------|------------|-----------|-----|-----|-----|-----|-----|-----|-----|
|         |            | 1         | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
| 2 COINS | 1 CREDIT   | OFF       | ON  | ON  | OFF | OFF | ON  | ON  | OFF |
| 4 COINS | 2 CREDITS  |           |     |     |     |     |     |     |     |
| 5 COINS | 3 CREDITS  |           |     |     |     |     |     |     |     |
| 6 COINS | 4 CREDITS  |           |     |     |     |     |     |     |     |
| 2 COINS | 1 CREDIT   | OFF       | ON  | OFF | ON  | OFF | ON  | OFF | ON  |
| 3 COINS | 2 CREDITS  |           |     |     |     |     |     |     |     |
| 4 COINS | 3 CREDITS  |           |     |     |     |     |     |     |     |
| 1 COIN  | 1 CREDIT   | OFF       | ON  | OFF | OFF | OFF | ON  | OFF | OFF |
| 2 COINS | 2 CREDITS  |           |     |     |     |     |     |     |     |
| 3 COINS | 3 CREDITS  |           |     |     |     |     |     |     |     |
| 4 COINS | 4 CREDITS  |           |     |     |     |     |     |     |     |
| 5 COINS | 6 CREDITS  |           |     |     |     |     |     |     |     |
| 1 COIN  | 1 CREDIT   | OFF       | OFF | ON  | ON  | OFF | OFF | ON  | ON  |
| 2 COINS | 2 CREDITS  |           |     |     |     |     |     |     |     |
| 3 COINS | 3 CREDITS  |           |     |     |     |     |     |     |     |
| 4 COINS | 5 CREDITS  |           |     |     |     |     |     |     |     |
| 1 COIN  | 1 CREDIT   | OFF       | OFF | ON  | OFF | OFF | OFF | ON  | OFF |
| 2 COINS | 3 CREDITS  |           |     |     |     |     |     |     |     |
| 1 COIN  | 2 CREDITS  | OFF       | OFF | OFF | ON  | OFF | OFF | OFF | ON  |
| 2 COINS | 4 CREDITS  |           |     |     |     |     |     |     |     |
| 3 COINS | 6 CREDITS  |           |     |     |     |     |     |     |     |
| 4 COINS | 8 CREDITS  |           |     |     |     |     |     |     |     |
| 5 COINS | 11 CREDITS |           |     |     |     |     |     |     |     |
| 1 COIN  | 2 CREDITS  | OFF       | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| 2 COINS | 4 CREDITS  |           |     |     |     |     |     |     |     |
| 3 COINS | 6 CREDITS  |           |     |     |     |     |     |     |     |
| 4 COINS | 9 CREDITS  |           |     |     |     |     |     |     |     |

## Theory of Operation

CONGO BONGO™ is a "state-of-the-art" electronic microprocessor based, video game. The result of hundreds of hours of work, design, research, experiment and more work. However, as with any electronic device, component failure or other problems can result in a game that doesn't function properly, or doesn't function at all. In either case, your game is "down", and so critically, are your profits.

Your objective is to fix it as quickly as possible, and logical troubleshooting goes a long way toward that repair. Although many troubleshooting methods may be familiar to you, procedural logic is common among them, and might be stated in this order: visual inspection, symptom recognition, symptom isolation, function isolation, component isolation and repair. Familiarity with the equipment in question will allow you to bypass one or more of these steps, as any particular problem may be obvious to you, or may have happened before. In general though, these 6 steps form a good premise upon which to approach your "down" game.

An extremely important item in our procedure is the first mentioned, giving the gear the "once over". A large percentage of failures found in electronics, show themselves visually and often a great deal of time can be saved by inspecting for burnt or blown components, loose or disconnected wiring or connectors, or PCB traces burnt or pulled up. Thorough visual inspections become increasingly important the closer you get to the faulty item, and should be repeated each time another portion of the game is eliminated. Symptom recognition (as with all electronic troubleshooting) in your CONGO BONGO™ depends first, on knowing what a proper display is, and second, knowing how your display differs from a normal one. Symptom isolation follows naturally; (i.e., "I have no picture", "I have no sound", "I have no control over the ship", "the picture is scrambled"), ergo, a video, audio, input or logic problem. Function isolation, such as a sync problem with the video, requires that you consider those functions that go to make up video sync. Is it a monitor problem, or an "on-the-board" problem? A monitor input check to verify the signal will tell you. Does the board have the voltage (from the power supply) that it needs? Yes? We must have a board failure, as we've just isolated down to function. Taking our sync problem further, before we begin our search for an individual component, let's reapply that first item in

our "Logical Troubleshooting Procedure". Look at the board. Open resistors, diodes, and capacitors often give themselves away.

Noticing a trace literally burned open can save you serious "down-time". The board looks OK, so on we go. Specific component isolation relates to the specific nature of the failure, component commonality, proper inputting (both signal and power) and proper outputting (as in the case of an output held high, low, or floating by input port failure in the succeeding state). More general problems (such as a total loss of video sync) requires the more involved procedure of systematic elimination of possibilities. This operation can be expedited however, by dividing the circuit in half, establishing a "go-no/go" at that point, and again dividing the suspect circuit portion in half. The largest possible areas can be eliminated in this manner, dividing and subdividing until the individual component failure is found.

CONGO BONGO<sup>TM</sup> is a microprocessor based, digital-integrated circuit computer video game. The heart of the computer is the CPU (U4, Zone 7-C, Sht. 1, Control Bd., 834-5166), a Z80A (P/N 315-0041). The Alpha type device MUST ALWAYS be used, as the Z80 is not fast enough to run the programs.

Master timing is IC-driven by U122, a G501533 that provides a stable frequency for J-K flip flops U46 & U47, located on the Video Board, Zone 4-B of Sht. 2 (834-5167). The "Phase Three X" signal (O3X) is applied to U-15 P-2 (Zone 3-D, Sht. 3, 834-5167) & is clocked out at pin 13 as the 1H frequency that appears thru P3 p-9 at the input to the CPU. U6 & Q10 (Zone 8-D, Sht. 1 of the Control Bd. 834-5166) polarize & reference 1H for input timing for U4 (Zone 7-C, Sht. 1, Control Board, 834-5166).

Manual system reset (Power-On) appears as a LO at P5 p-L (Zone 8-D, Sht. 2, Control Bd., 834-5166) and is then felt through filter BF8, & is applied to pin-26 of the CPU (U4, Sht. 1, Zone 7-C, Control Bd., 834-5166). Normal program interrupts (INT) are felt at pin-16 of the Z80A (an edge-triggered LO), and are the result of Input/Output activity timing with vertical blanking (an approx. 2 msec. instruction interrupt). The WAIT signal is used to synchronize that I/O activity during an interrupt to the CPU. U5 and 7 (Zone 7-C, Sht. 1, Control Bd., 834-5166) are address bus drivers. Three of the sixteen address lines pass through U56 (Zone 5-C, Sht. 1, Control Bd., 834-5166) and subsequently drive the Chip Enable inputs of EPROM IC's 32-35 and RAM IC's 36 & 37 (Sht. 1, Control Bd., 834-5166). U48 & 9, 62 & 63 (Sht. 4, Control Bd., 834-5166) are input ports on the data bus. U64 supplies service switch, game start and coinage to the input ports. U14 and 18 input

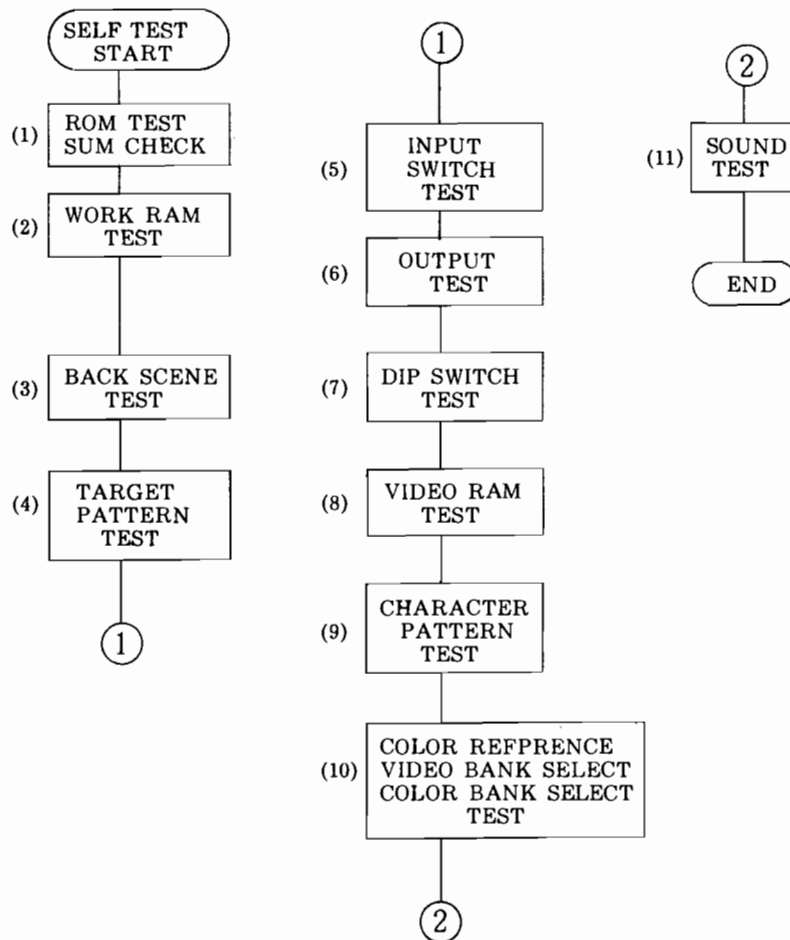


Coin B, and U15 and 18 input Coin A. U16 & 19 input service switch, while U64 & drives player start to I/O processor U9 (Zone 5-C, Sht. 1, Control Bd., 834-5166). IC111, 112 and 114 accesses/buffers Player Left/Right data, IC111 and 113 interfaces Fire data, and Option Selection is shared by all 4 74LS244's. Located on the Control Board is the Self-Test switch. When closed, it applies a LO to U4 p-17 (Zone 7-C, Sht. 1, Control Bd., 834-5166) initiating a systems/function verification outlined on the following page:

## Self-Test

CONGO BONGO™ is equipped with a diagnostics self-testing program that is initiated by pressing the Self-Test button located on the Control Board Assembly. The test is used to detect malfunctions in Video alignment, I/O interface and P.C.B. electronics.

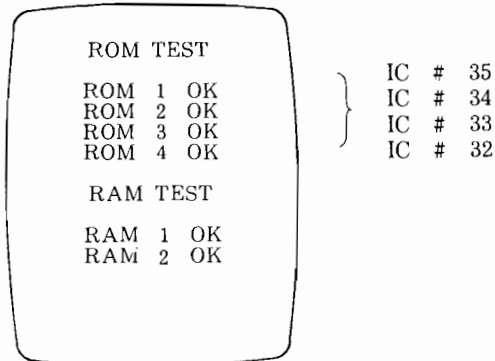
The test will appear in the following order, with the words "OK" or "BAD" being displayed on the screen in accordance with the condition of the tested circuit. Self-Test step sequencing is done by pressing the Player 1 button after each individual test.



## SELF-TEST (cont.)

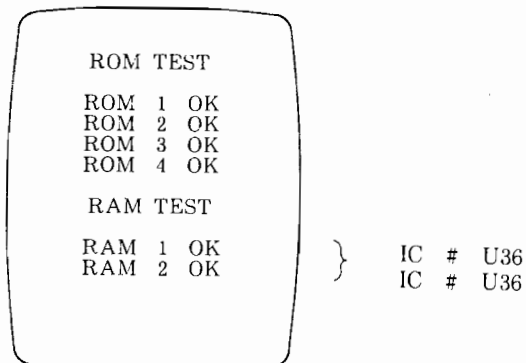
### 1. ROM Test

This test checks the four main program EPROMs by performing individual "check sum" tests. These EPROMs are located on the Control Board.



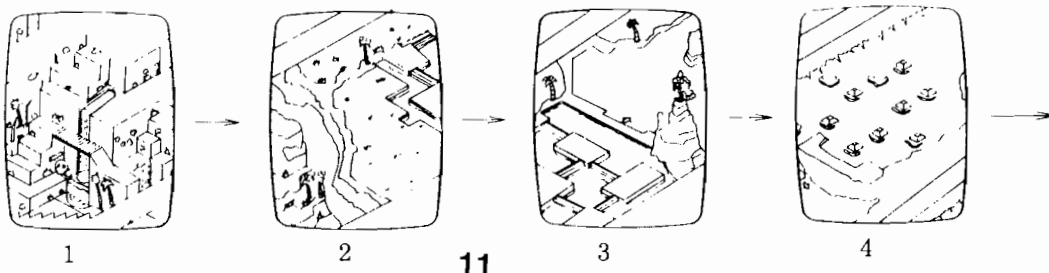
### 2. RAM Test

This test checks RAM 1 and RAM 2 by performing a cross-talk test between each adjacent bit in the RAMs. These RAMs are located on the Control Board.

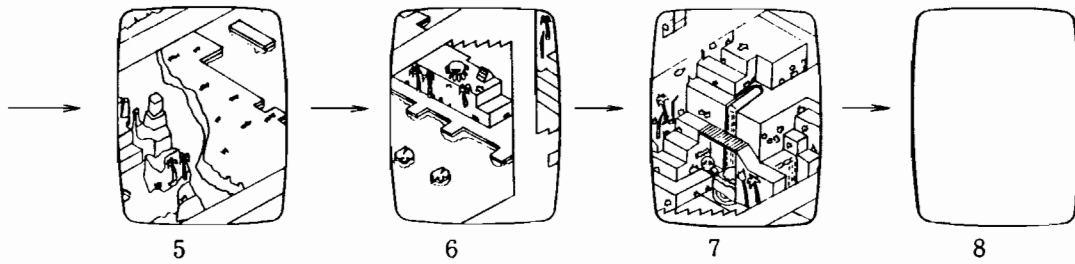


### 3. Background Scene Test

This test checks the background displays of the game in eight (8) individual steps. Advance through the steps by pressing the Player 1 button, until the eighth display (a blank screen) is reached.

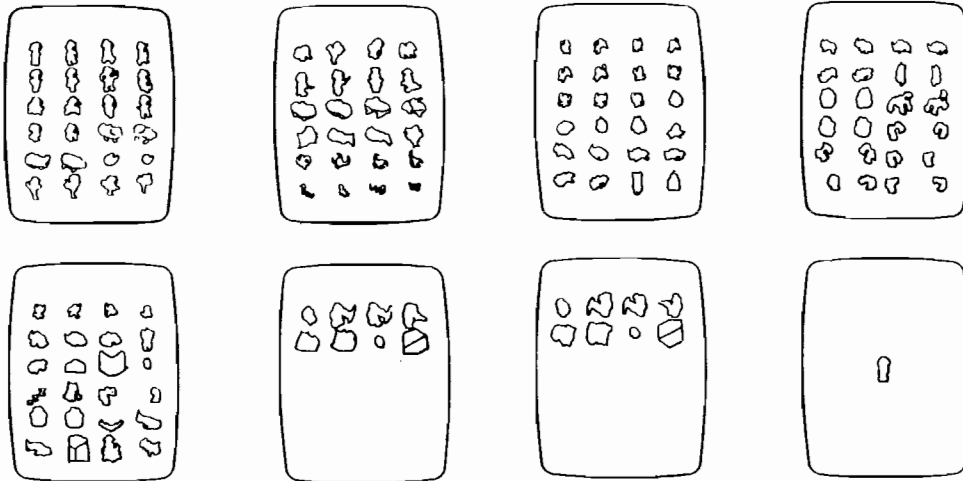


## SELF-TEST (cont.)



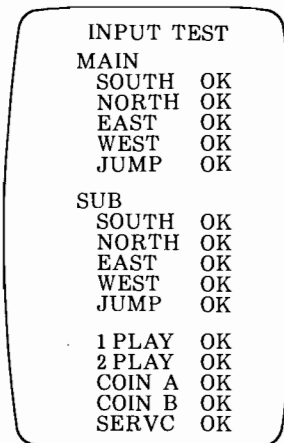
### 4. Target Test

Here we check the target patterns used in the game in eight (8) individual steps. Again, advance through the test with the Player 1 button, scene by scene. Movement and 180° Flip (for Cocktail Tables) are verified here as well.



### 5. Input Test

This test checks the input switches used for operator control, and input signals from the player controls to software.



## SELF-TEST (cont.)

### 6. Output Test

This test verifies output ports used to interface computer software to game hardware.

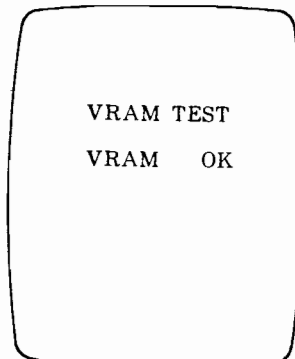


### 7. DIP Switches

Operation of the DIP Switches are checked here, internally, by simultaneously turning on, and then off, all odd switch positions, followed by all even switch positions. "Test 1" is displayed at the end of the cycle. Pressing the Player 1 button initiates "Test 2" for DIP Switch 2.

### 8. Video RAM Test

Here Video RAMs used for character pattern display are tested. These RAMs are located on the Video Board.

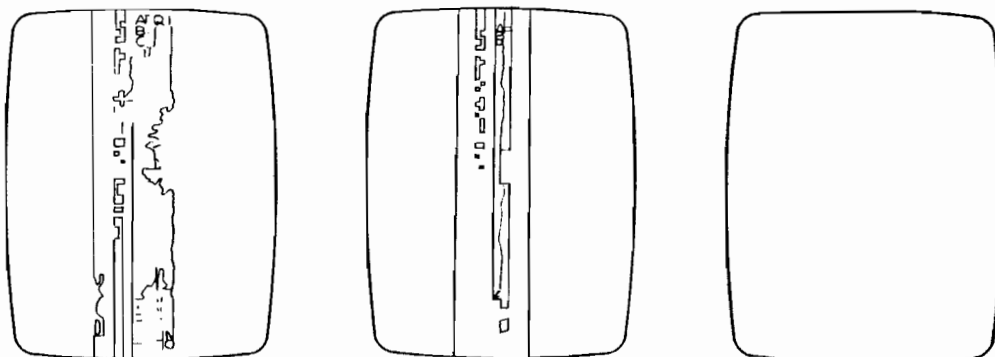




## SELF-TEST (cont.)

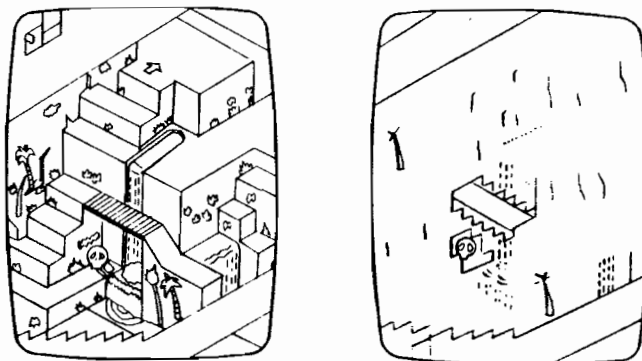
### 9. Character Pattern Test

This test checks the ROMs used for character patterns and picture patterns. During this test all the patterns contained within each ROM will be displayed. Character pattern ROMs are located on the Video Board.



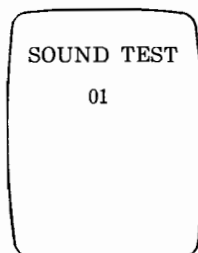
### 10. Color Control Reference Test

Character pattern and background picture color control is checked here by color reference changes with each pressing of the Player 1 button.



### 11. Sound Port Test

This test verifies that proper sound outputs are generated with each pressing of the Player 1 button. Twenty-nine individual sounds are generated, one at a time, sequenced by the Player 1 button, and appear in order on the following page.



SELF-TEST (cont.)

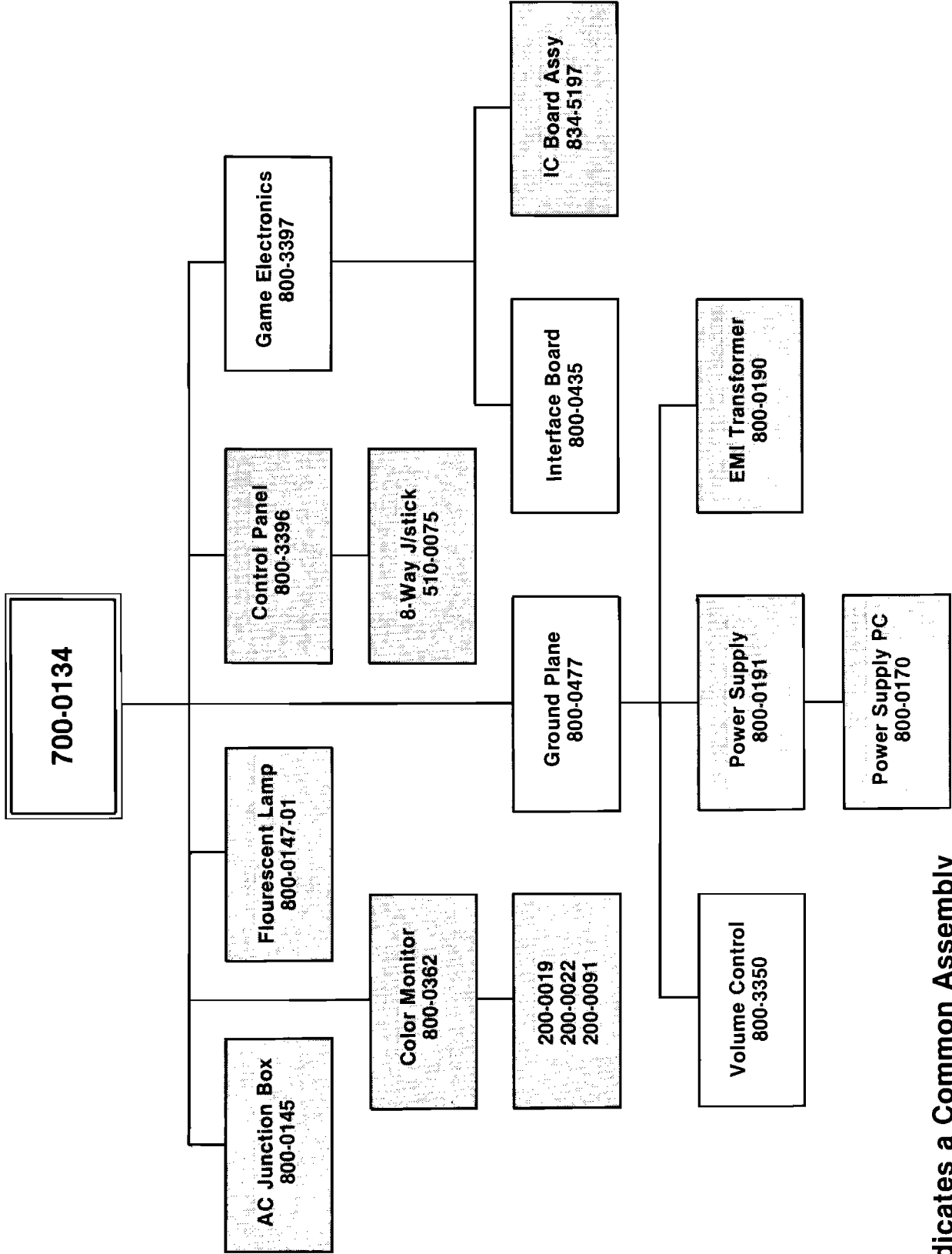
11. Sound Port Test (cont.)

- 01 No sound
- 02 Gorilla lullaby
- 03 Player victory music
- 04 Player clear music
- 05 "Player goes to Heaven" music (in the water)
- 06 "Player goes to Heaven" music (other than in the water)
- 07 Fire
- 08 Player step sound
- 09 Player drop sound
- 10 Player jump sound
- 11 "Monkey on my back" sound
- 12 Held by monkey sound
- 13 Hit by coconuts sound
- 14 "Crumbling crevasse" sound
- 15 Passage of snake sound
- 16 Rush of rhino sound (A)
- 17 Rush of rhino sound (B)
- 18 Rhino screeching to a stop sound
- 19 Player digging sound
- 20 Fish sound
- 21 Special Bonus sound
- 22 Credit sound
- 23 Gorilla laughing
- 24 Hippo sinking sound
- 25 Background music for scene # 1
- 26 Background music for scene # 2
- 27 Background music for scene # 3
- 28 Background music for scene # 4
- 29 Bonus score up sound

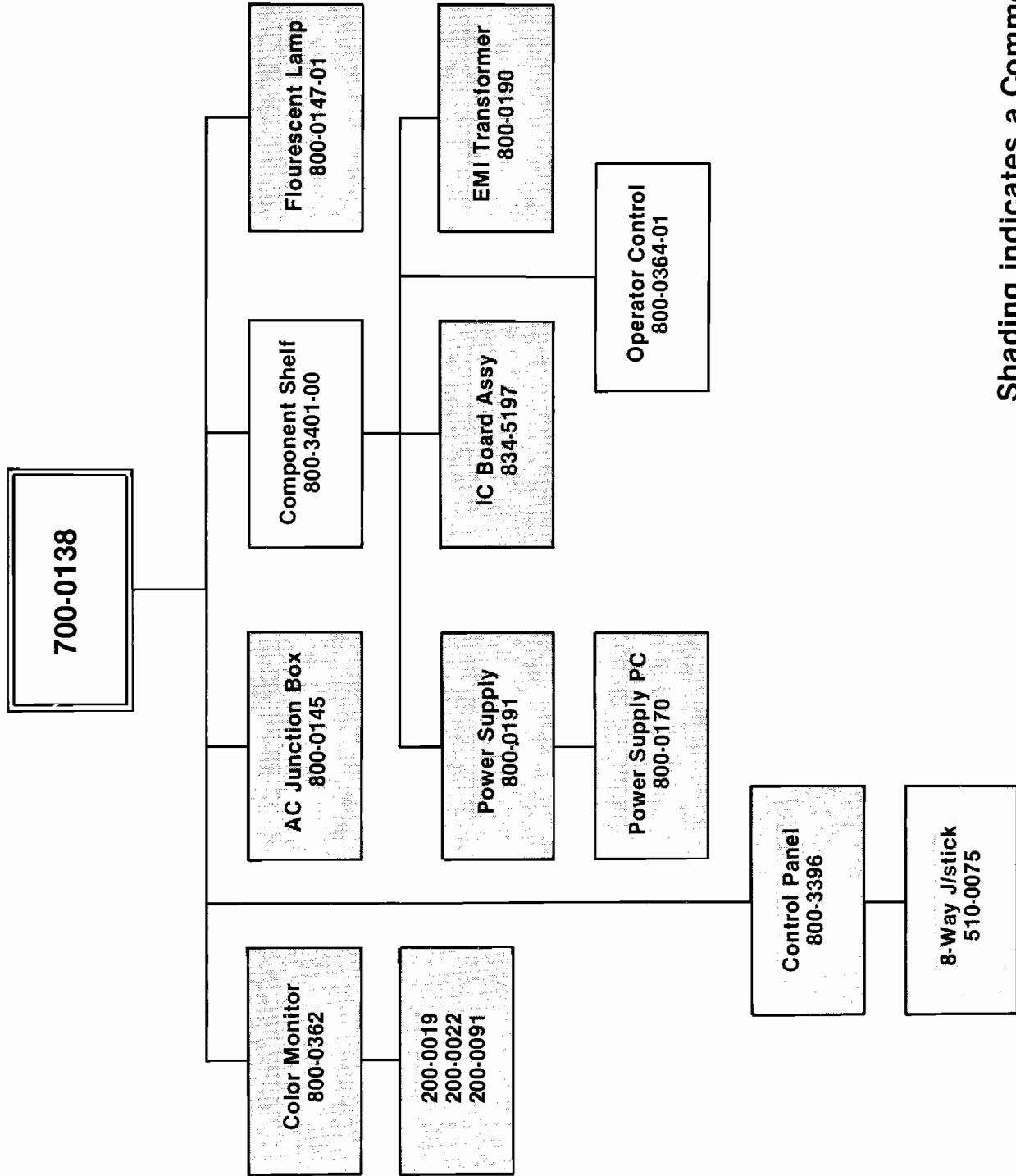
Due to the striking graphics employed in CONGO BONGO™, memory requirements for background generation are significant. On the VIDEO Bd. (834-5167) there are nine (9) 2764-30 64K X 8 EPROMs that hold video character, positioning, color and timing information, in addition to the five (5) program 2764-30's on the Control Bd. Background generation accessible memory (RAM) is provided by TTL IC's U12 and U53 (Zone 7-C and 3-D respectively, Sht. 2, on the VIDEO Bd., 834-5167), in addition to U59 on Sht. 4 of the Control Board (834-5166). RGB color data is found fully processed at P5 pins w, 19 and X respectively, on the Control Board (Zone 6-D, Sheet 2, 834-5166). Video COMPSYN (Composite Synchronization) can be found at the same location. U68 (Sht. 2, Zone 4-D, 834-5166) is the primary color PROM.

Just as the microprocessor Z80A is the heart of the game computer, so too is the Sound Board equipped with its own Z80A microprocessor as well as an 8255A-C Sound Generator (Zone 4-C & 7-C, Sht. 1, 834-5168, respectively). Implying a 4.00 MHz crystal-driven (Zone 6-D, Sht. 1 834-5168) timing frequency at pin 6, U3 processes program data held by U10 & 11 to set enable parameters used by Sound Generator U1. U1 in turn processes external noise sources (Sht. 2, 834-5168) to produce an integrated sound output felt at P1 p-9 (Zone 8-C, Sht. 1, 834-5168). Back on the Control Board, P4 pin-3 (Sht. 3, Zone 5-C, 834-5166) inputs our sound to OP Amp U2, thru Volume Control pot. VR1 (Zone 8-D, Sht. 3, 834-5166) to the Audio Amplifier U1 (Zone 7-C, Sht. 3, 834-5166) & out to the speaker at P5 pins H & 7 (Zone 8-B, Sht. 3, 834-5166).

# Assembly Organization

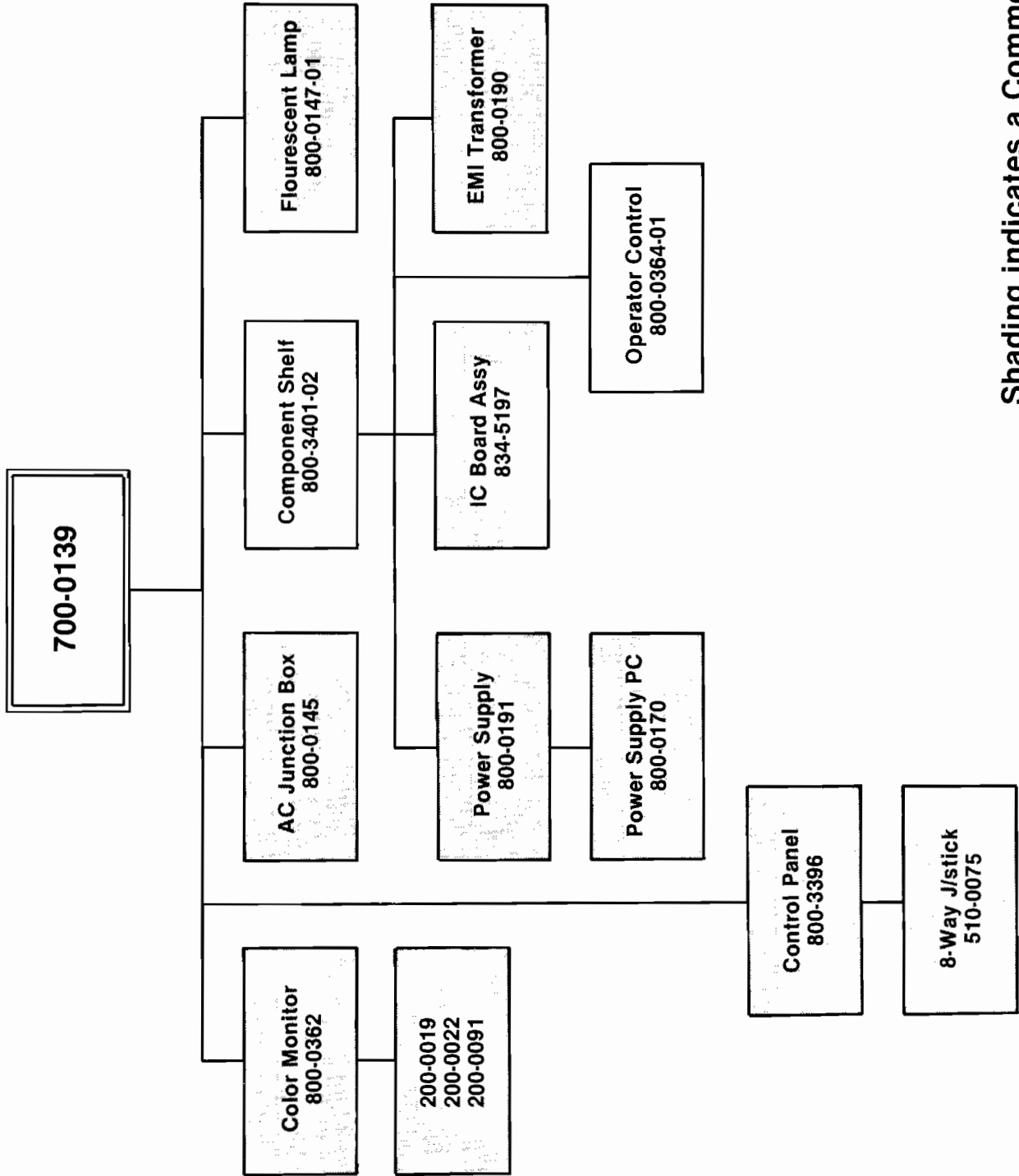


Shading indicates a Common Assembly



Shading indicates a Common Assembly





Shading indicates a Common Assembly

# **Parts Catalog**

**700-0134 Top Assembly**

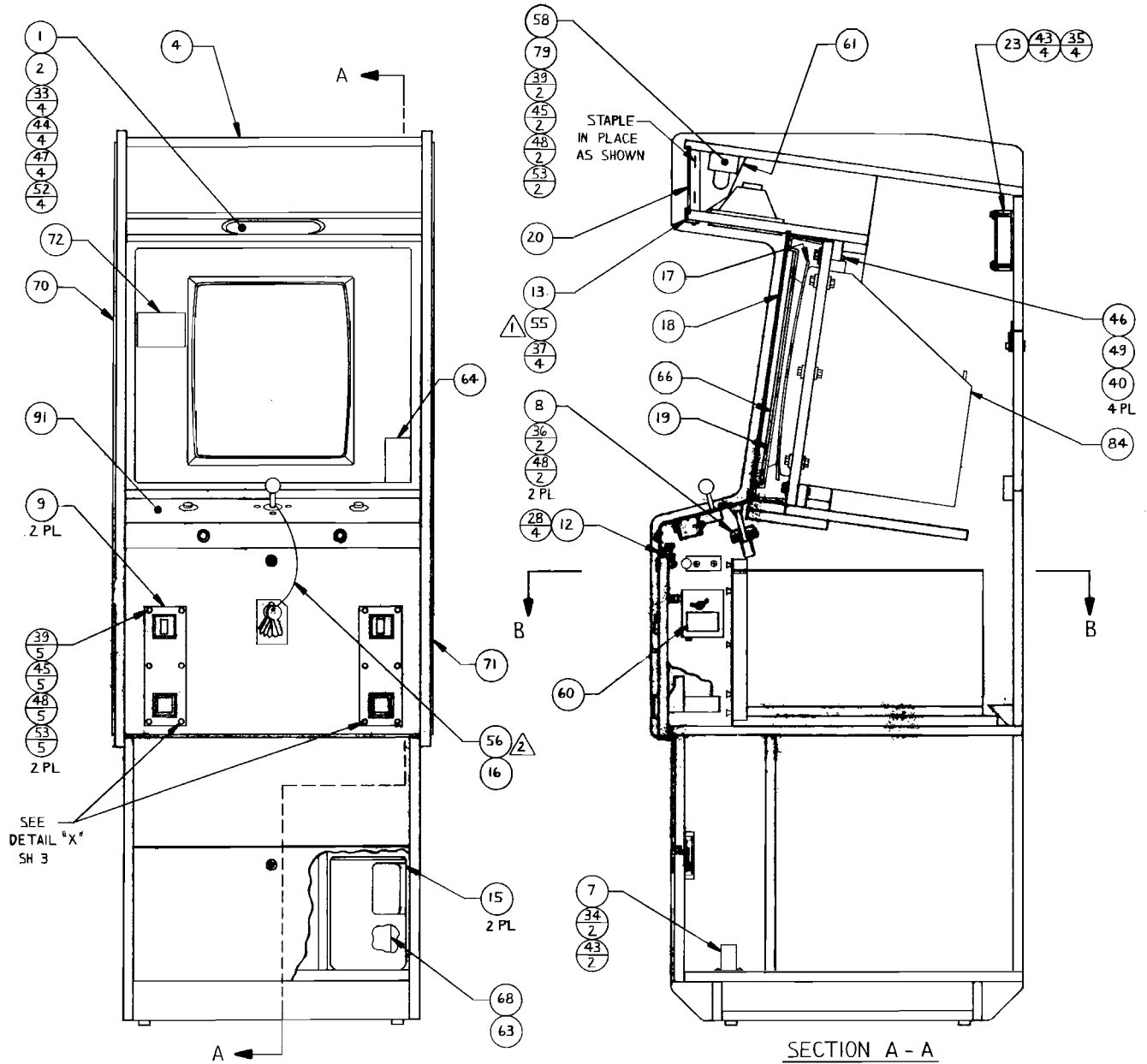
| <u>ITEM NO.</u> | <u>PART NO.</u>               | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>         |
|-----------------|-------------------------------|-----------------------------|----------------------------|
| 1               | 130-0002-00                   | 1                           | Speaker Cover 6 x 9        |
| 2               | 130-0020-00                   | 1                           | Speaker 6 x 9, 8 OHM, 10W  |
| 3               | 140-0021-00                   | 1                           | Cover Junction Box         |
| 4               | 140-0055-03                   | 1                           | Cabinet Universal Game     |
| 5               |                               |                             |                            |
| 6               |                               |                             |                            |
| 7               | 220-0008-00                   | 1                           | Counter Digital 6V         |
| 8               | 220-0178-00                   | 2                           | Draw Catch                 |
| 9               | 220-0194-00<br>or 220-0195-00 | 2                           | Coin MECH W/Lamp           |
| 10              |                               |                             |                            |
| 11              |                               |                             |                            |
| 12              | 250-0038-00                   | 1                           | Moulding Strip             |
| 13              | 250-0492-00                   | 1                           | Moulding logo              |
| 14              |                               |                             |                            |
| 15              | 253-0222-00                   | 2                           | Coin Receptacle            |
| 16              | 253-0238-00                   | 1                           | Plastic Bag 3.00 x 4.00    |
| 17              | 253-0254-00                   | 1                           | Mask CRT 19 IN.            |
| 18              | 253-0228-00                   | 1                           | Monitor Panel Clear        |
| 19              | 253-0284-00                   | 1                           | Bezel Plastic CRT Vertical |
| 20              | 253-0328-00                   | 1                           | Panel logo                 |
| 21              |                               |                             |                            |
| 22              |                               |                             |                            |
| 23              | 260-0001-00                   | 1                           | Fan Axial Cooling          |
| 24              |                               |                             |                            |
| 25              |                               |                             |                            |
| 26              | 280-0005-00                   | 40                          | Cable Tie                  |
| 27              | 280-0362-00                   | 2                           | Electrical Crimp Sleeve    |
| 28              | 280-0475-00                   | 30                          | Staple                     |
| 29              | 280-0495-00                   | 1                           | Spring, CPRSN .360 OD      |
| 30              |                               |                             |                            |

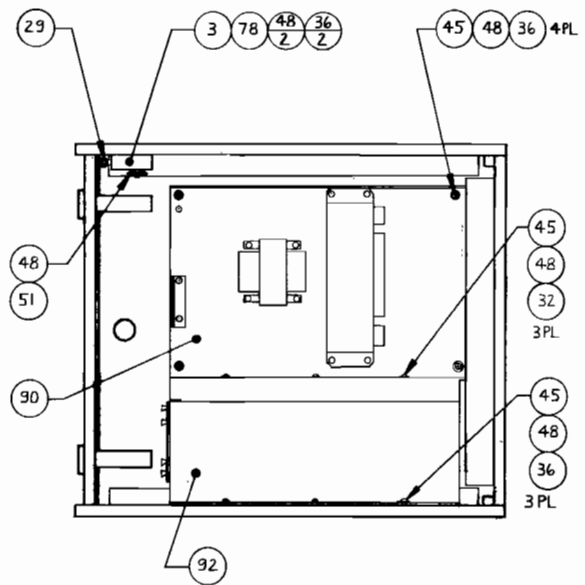
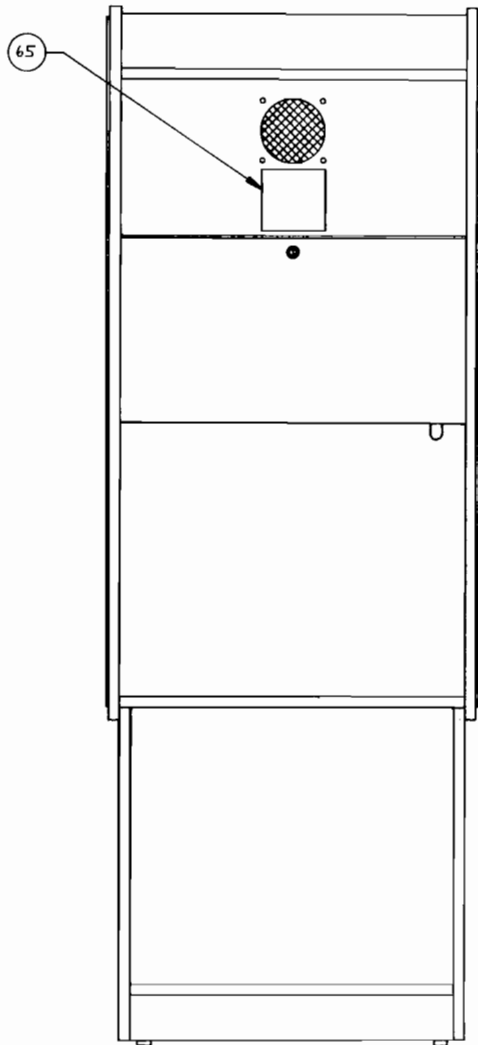
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>                                       |
|-----------------|-----------------|-----------------------------|--|
| 31              | 281-0004-12     | 1                           | SCR 8-32 x .750 PN HD PHIL MACH                          |
| 32              | 281-0006-08     | 4                           | SCR 10-32 x .500 PN HD PHIL MACH                         |
| 33              | 281-0014-28     | 4                           | SCR 8-32 x 1.75 OVH PHIL MACH                            |
| 34              | 281-0042-12     | 2                           | SCR 6-20 x .750 PN HD PHIL Sheet<br>Metal Type AB        |
| 35              | 281-0042-32     | 4                           | SCR 6-20 x 2.00 PN HD PHIL Sheet<br>Metal Type AB        |
| 36              | 281-0045-12     | 15                          | SCR 10-16 x .750 PN HD PHIL Sheet<br>Metal Type AB       |
| 37              | 281-0134-12     | 4                           | SCR 8-18 x .750 PN HD PHIL Sheet<br>Metal Type AB, Black |
| 38              | 283-0062-05     | 1                           | Washer #8 Lock INT Tooth                                 |
| 39              | 282-0005-20     | 14                          | Bolt 10-24 x 1.25 CRG HD, MACH, Black                    |
| 40              | 282-0017-24     | 4                           | Bolt 1/4-20 x 1.50 HEX HD MACH                           |
| 41              | 283-0060-23     | 1                           | Washer #8 Flat, STL, Wide                                |
| 42              | 283-0060-24     | 2                           | Washer #10 Flat, STL, Narrow                             |
| 43              | 283-0060-18     | 6                           | Washer #6 Flat, STL, Narrow                              |
| 44              | 283-0060-22     | 5                           | Washer #8 Flat, STL REG                                  |
| 45              | 283-0060-25     | 26                          | Washer #10 Flat, STL, REG                                |
| 46              | 283-0060-34     | 4                           | Washer # 1/4 Flat, STL, LGE                              |
| 47              | 283-0061-05     | 4                           | Washer #8 Lock, Split, STL                               |
| 48              | 283-0061-06     | 33                          | Washer #1- Lock, Split, STL                              |
| 49              | 283-0061-08     | 4                           | Washer # 1/4 Lock, Split, STL                            |
| 50              | 283-0072-16     | 1                           | Nut 10-32 HEX MACH                                       |
| 51              | 283-0071-14     | 1                           | Nut 10-24 Wing, STL, MACH                                |
| 52              | 283-0072-13     | 5                           | Nut 8-32 HEX, MACH                                       |
| 53              | 283-0072-15     | 14                          | Nut 10-24 HEX, MACH                                      |
| 54              | 289-0002-02     | 2                           | Cable Clamp .250 Nylon                                   |
| 55              | 320-0020-00     | 2'                          | Sealant Foam   |
| 56              | 320-0051-00     | 1'                          | Tie Ribbon Wire Plastic Coated                           |
| 57              |                 |                             |  |

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>          |
|-----------------|-----------------|-----------------------------|-----------------------------|
| 58              | 390-0019-00     | 1                           | Lamp Fluorescent            |
| 59              |                 |                             |                             |
| 60              | 420-0030-00     | 1                           | Decal Caution 115V          |
| 61              | 420-0624-00     | 1                           | Light Baffle                |
| 62              | 420-0793-00     | 1                           | Decal Toll Free No.         |
| 63              | 420-0912-00     | 1                           | Decal FCC Rules Compliance  |
| 64              | 420-0914-07     | 1                           | Decal Original Game Seal    |
| 65              | 420-0917-00     | 1                           | Decal FCC Warning           |
| 66              | 420-0977-00     | 1                           | Graphic Interior            |
| 67              | 420-0978-00     | 1                           | Decal, Box                  |
| 68              | 420-0979-00     | 1                           | Manual                      |
| 69              | 420-0982-0      | 1                           | Decal Dip SW Settings       |
| 70              | 420-0993-00     | 1                           | Graphic Side Right          |
| 71              | 420-0994-00     | 1                           | Graphic Side Left           |
| 72              | 420-1007-00     | 1                           | Decal Game Instructions     |
| 73              |                 |                             |                             |
| 74              |                 |                             |                             |
| 75              |                 |                             |                             |
| 76              |                 |                             |                             |
| 77              |                 |                             |                             |
| 78              | 800-0145-00     | 1                           | Assy. AC Junction Box       |
| 79              | 800-0147-01     | 1                           | Fluorescent Lamp Assy. 2 UL |
| 80              | 800-0232-00     | 1                           | Assy. Harn. GND             |
| 81              | 800-0322-00     | 1                           | Assy. Cord Fan              |
| 82              | 800-0329-00     | 1                           | Assy. Harn. Monitor AC      |
| 83              | 800-0330-00     | 1                           | Assy. Harn. GND Monitor     |
| 84              | 800-0362-00     | 1                           | Assy. Monitor CLR Vertical  |
| 85              | 800-0370-00     | 1                           | GND Strap                   |
| 86              | 800-0371-00     | 1                           | Assy. Speaker Harn.         |
| 87              | 800-0372-00     | 1                           | Harn. Coin MECH             |
| 88              | 800-0423-06     | 1                           | Assy. GND Strap             |

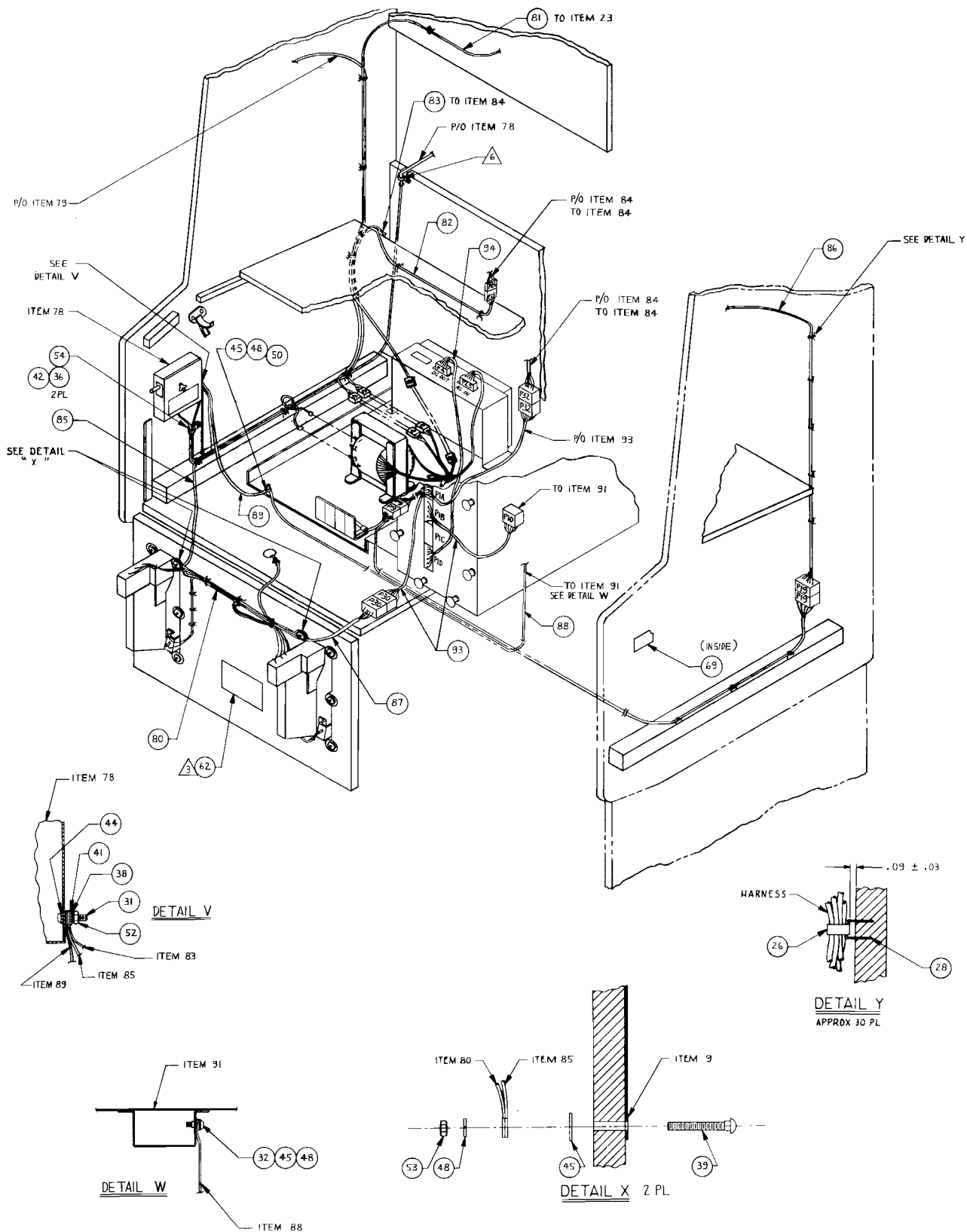


| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>     |
|-----------------|-----------------|-----------------------------|------------------------|
| 89              | 800-0423-07     | 1                           | Assy. GND Strap        |
| 90              | 800-0477-00     | 1                           | Assy. Ground Plane     |
| 91              | 800-3396-00     | 1                           | Control Panel Assy.    |
| 92              | 800-3397-00     | 1                           | Assy. Game Electronics |
| 93              | 800-3399-00     | 1                           | Master Harn. Assy.     |
| 94              | 800-0478-00     | 1                           | Power Harn. Assy.      |
|                 | 420-0780-00     | REF                         | Game Shipping Kit      |





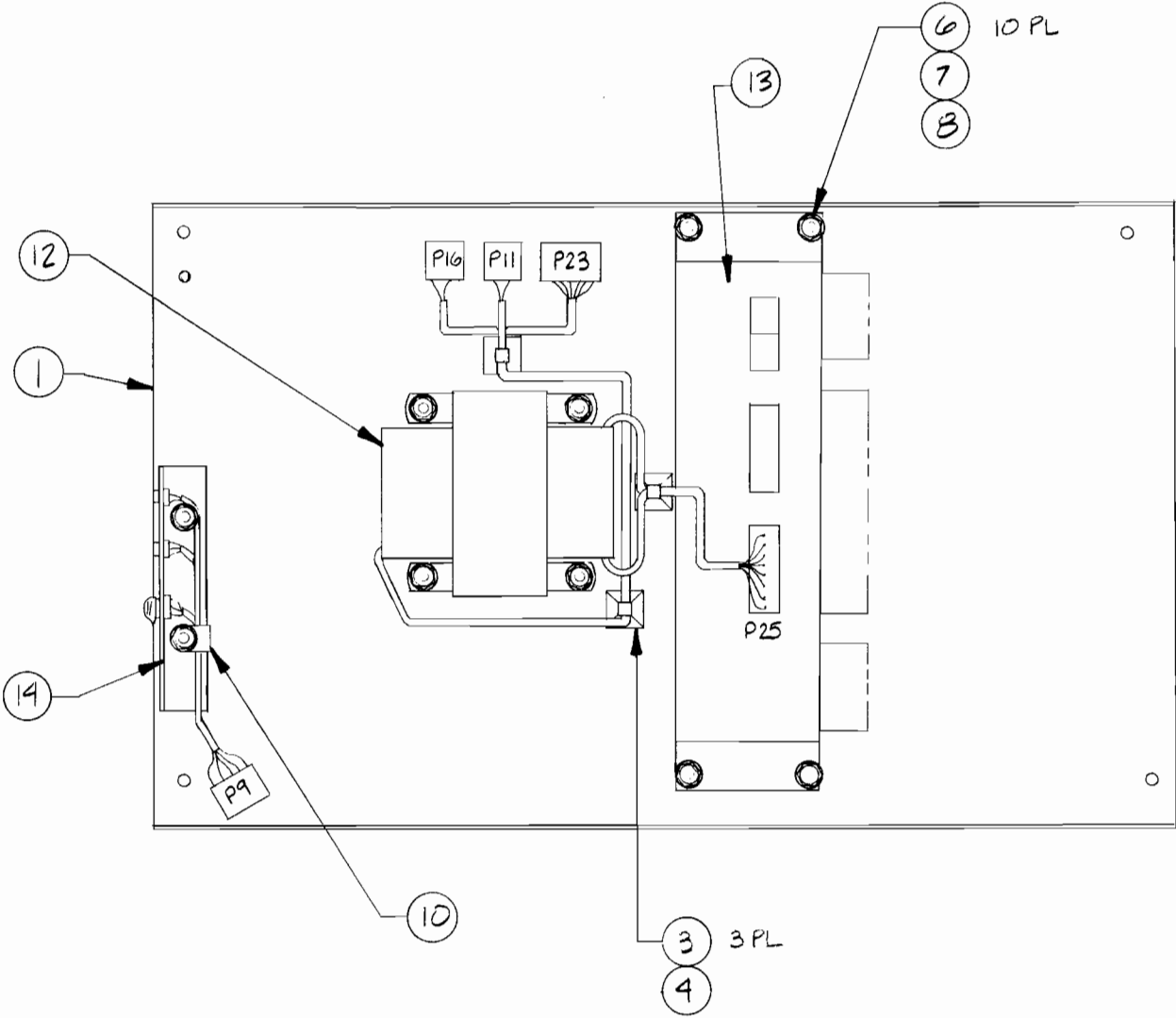
SECTION B-B



## GROUND PLANE ASSEMBLY

DRAWING NUMBER 800-0477

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>      |
|-----------------|-----------------|------------------|-------------------------|
| 1               | 250-0647-00     | 1                | Ground Plane            |
| 2               |                 |                  |                         |
| 3               | 280-0005-00     | 3                | Cable Tie               |
| 4               | 280-0327-00     | 3                | Base Tie Wrap           |
| 5               |                 |                  |                         |
| 6               | 283-0061-06     | 10               | Washer, #10 Lock.       |
| 7               | 283-0060-25     | 10               | Washer, #10 Flat        |
| 8               | 283-0072-16     | 10               | Nut, 10-32 Hex          |
| 9               |                 |                  |                         |
| 10              | 289-0002-02     | 1                | Cable Clamp Nylon       |
| 11              |                 |                  |                         |
| 12              | 800-0190-00     | 1                | EMI Xformer Assembly    |
| 13              | 800-0191-04     | 1                | G-80 Power Supply       |
| 14              | 800-3350-00     | 1                | Volume Control Assembly |



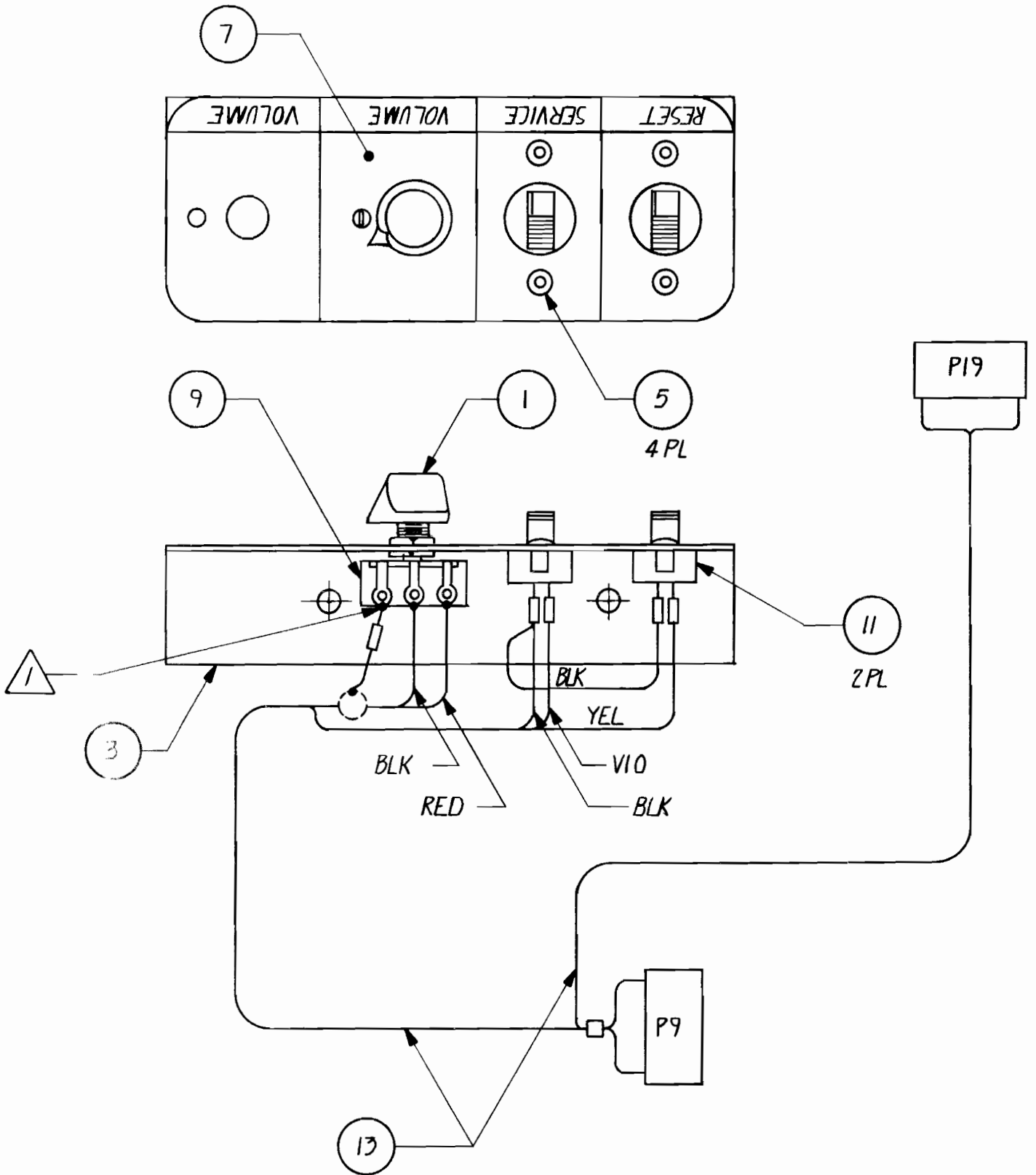
## VOLUME CONTROL BLOCK ASSEMBLY

DRAWING NUMBER 800-3350

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>                |
|-----------------|-----------------|------------------|-----------------------------------|
| 1               | 240-0001-00     | 1                | Volume Control Knob               |
| 2               |                 |                  |                                   |
| 3               | 250-0462-00     | 1                | Volume Control Bracket            |
| 4               |                 |                  |                                   |
| 5               | 289-0003-18     | 4                | Eyelet, Rolled Flange Head, Brass |
| 6               |                 |                  |                                   |
| 7               | 420-0623-00     | 1                | Operator Control Panel Decal      |
| 8               |                 |                  |                                   |
| 9               | 475-0007-00     | 1                | Potentiometer, 10K Car Panel Mnt. |
| 10              |                 |                  |                                   |
| 11              | 510-0051-00     | 2                | Switch, Pushbutton                |
| 12              |                 |                  |                                   |
| 13              | 800-3355-00     | 1                | Harness, Volume Control Block     |

# Volume Control Assembly

800-3350

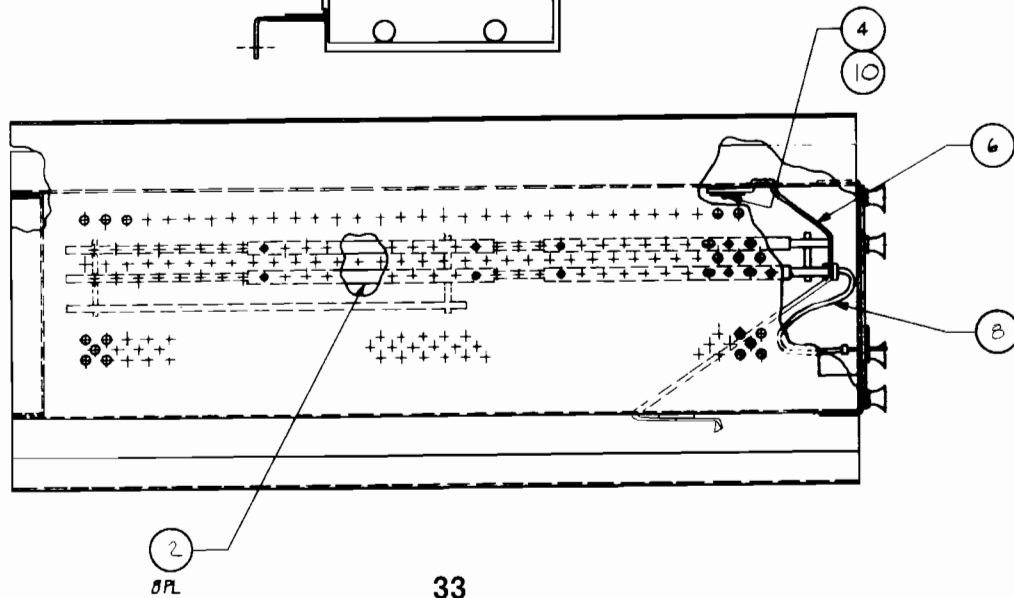
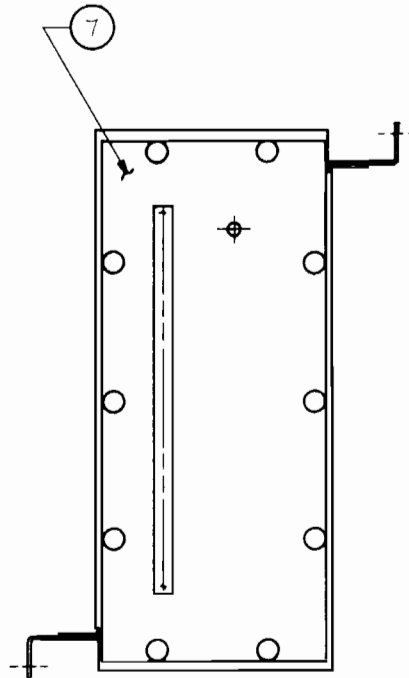
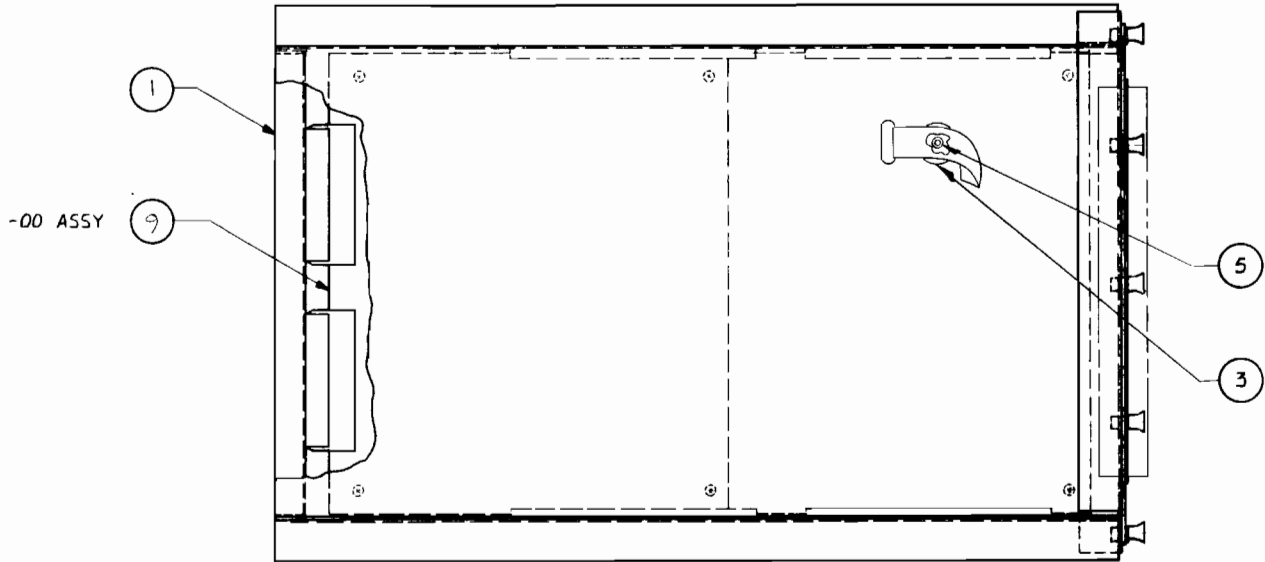




## GAME ELECTRONICS ASSEMBLY

DRAWING NUMBER 800-3397

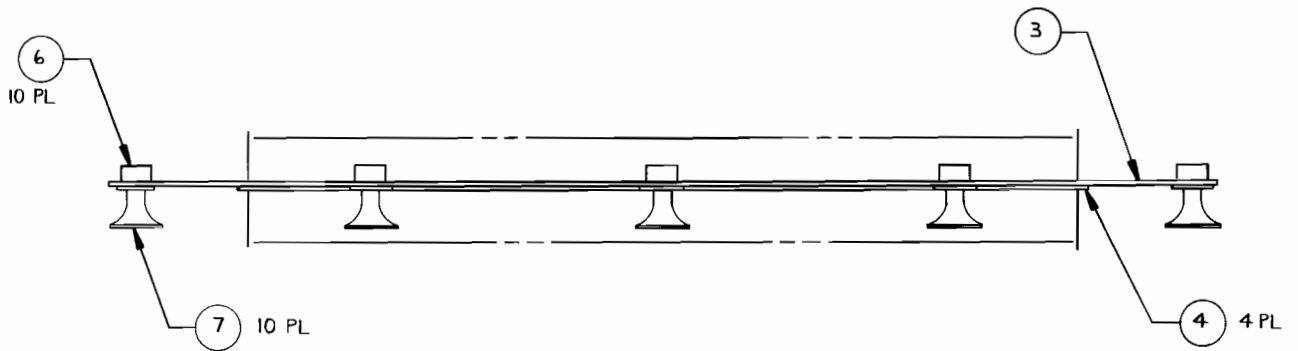
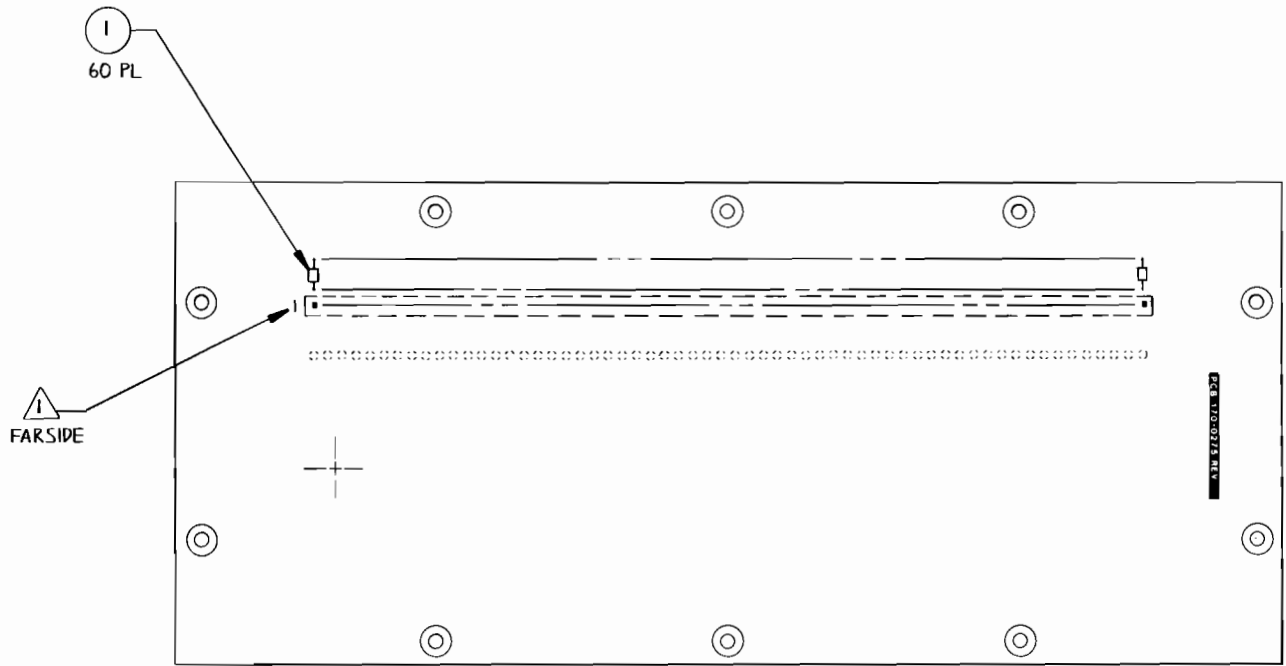
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>         |
|-----------------|-----------------|-----------------------------|----------------------------|
| 1               | 250-0621-00     | 1                           | Welded Elec. Housing Assy. |
| 2               | 253-0309-00     | 8                           | Card Guide, Deep Channel   |
| 3               | 280-0499-00     | 1                           | Velco Disc.                |
| 4               | 283-0060-14     | 1                           | Washer Flat, STL           |
| 5               | 289-0003-16     | 1                           | Eyelet .121 Dia. x .187 LG |
| 6               | 320-0062-00     | .75'                        | Strap Velco Loop           |
| 7               | 800-0435-00     | 1                           | Interface Board Assy.      |
| 8               | 800-0479-00     | 1                           | Interface Harn. Assy.      |
| 9               | 834-5197-00     | 1                           | IC Board Assy.             |
| 10              | 283-0064-04     | 1                           | Rivet .125 Dia. x .187     |



## INTERFACE BOARD ASSEMBLY

DRAWING NUMBER 800-0435

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>   |
|-----------------|-----------------|------------------|----------------------|
| 1               | 151-0061-00     | 60               | CAP, 220PF 16V AXIAL |
| 2               |                 |                  |                      |
| 3               | 170-0275-00     | 1                | PCB, Interface       |
| 4               | 212-0021-00     | 6                | CONN. M 10-pin       |
| 5               |                 |                  |                      |
| 6               | 289-0005-05     | 10               | Latch Grommet        |
| 7               | 289-0005-06     | 10               | Latch Plunger        |



## **700-0137 Top Assembly**

## TOP ASSEMBLY

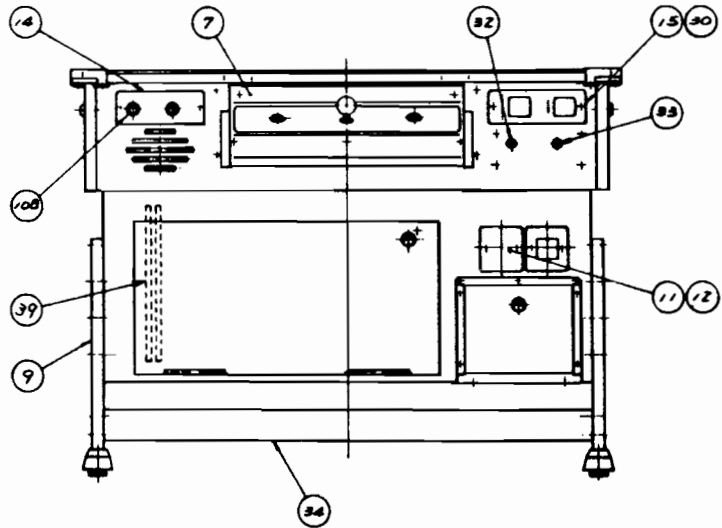
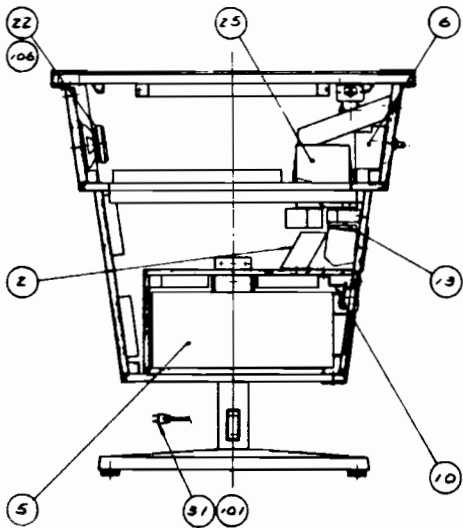
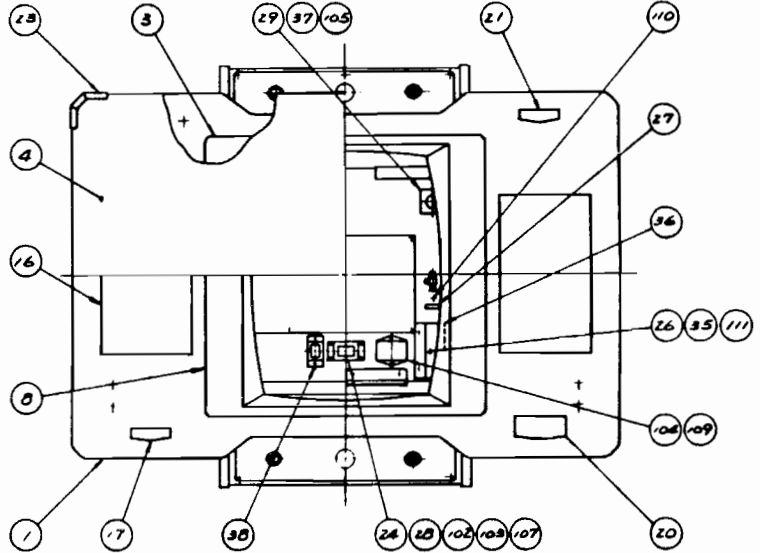
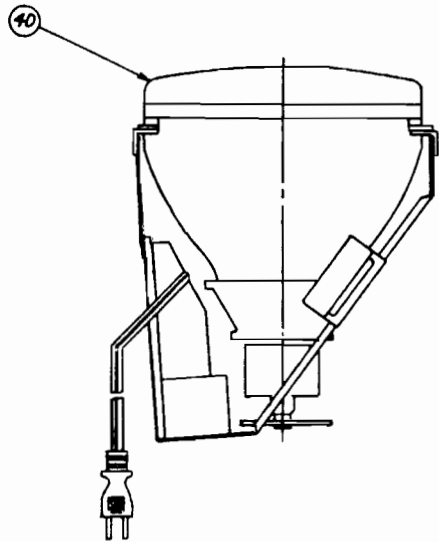
DRAWING NUMBER 700-0137

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> |     | <u>DESCRIPTION</u>                |
|-----------------|-----------------|------------------|-----|-----------------------------------|
|                 |                 | -00              | -01 |                                   |
| 1               | 834-0327        | 1                | 1   | T8 Cabinet Accessory Assy         |
| 2               | 220-0190        | 2                | 2   | Lower Coin Chute                  |
| 3               | 601-0662        | 1                | 1   | CRT Mask, Grey Smoke              |
| 4               | 275-0078        | 1                | 1   | Table Glass, Black                |
| 5               | 220-0191        | 1                | 1   | Cash Box                          |
| 8               | 601-0663        | 1                | 1   | TV Mask                           |
| 9               | 601-0664        | 2                | 2   | Leg Assy                          |
| 15              | 117-0169        | 1                | 1   | Coin Entry Plate                  |
| 16              | 420-1010        | 1                | 1   | Play Instructions Decal           |
| 20              | 420-0755        | 1                | 1   | Denomination Decal                |
| 22              | 117-0170        | 1                | 1   | Speaker Guard Plate               |
| 23              | 601-0542        | 1                | 1   | Hook                              |
| 25              | 220-0084        | 2                | 2   | Coin Chute, Rejector-type         |
| 30              | 117-0202        | 1                | 1   | Denomination Plate, 25¢ X 2       |
|                 | 117-0171        | 1                | 1   | Denomination Plate, 25¢           |
| 31              | 834-0125        | 1                | 1   | Cable and Plug Assy               |
| 32              | 240-0120        | 2                | 2   | Reject Button Assy                |
| 39              | 834-5165        | 1                | 1   | Game Electronics Assy             |
| 40              | 200-0039        | 1                | 1   | 19" Color Monitor                 |
| 102             | 509-0039        | 1                | 1   | Switch, Push Button               |
| 103             | 420-0379        | 1                | 1   | Owner's Manual                    |
| 106             | 130-0017        | 1                | 1   | Speaker, 8ohm, 3W                 |
| 107             | 601-0444        | 1                | 1   | C & R Combination Element, 0.1uf  |
| 108             | 509-0117        | 1                | 1   | Switch, Illum. Yellow Push Button |
| 109             | 601-0429        | 1                | 1   | Noise Filter, AC 250V, 4A         |
| 111             | 420-1008        | 1                | 1   | Volume Control Decal              |
|                 | 420-0982        | 1                | 1   | DIP Switch Decal                  |
|                 | 420-0914-07     | 1                | 1   | Game Seal Decal                   |
|                 | 420-0912        | 1                | 1   | FCC Compliance Decal              |
|                 | 117-0234        | 1                | 1   | Control Panel Overlay             |
|                 | 117-0204        | -                | 1   | 8-Way Guide Plate                 |
|                 | 250-0656        | -                | 1   | Bracket (WF-0001X)                |
|                 | 250-0657        | -                | 1   | Bracket (WF-0002)                 |

## TOP ASSEMBLY

DRAWING NUMBER 700-0137

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> |     | <u>DESCRIPTION</u> |
|-----------------|-----------------|------------------|-----|--------------------|
|                 |                 | -00              | -01 |                    |
|                 | 250-0658        | -                | 1   | Bracket (WF-0003)  |
|                 | 283-0072-07     | 6                | -   | Nut, 4-40 Hex      |
|                 | 283-0060-13     | 6                | -   | Washer, #4 Flat    |
|                 | 283-0061-02     | 6                | -   | Washer, #4 Lock    |
|                 | 211-0173-00     | 6                | -   | Shorting Clip      |





## T8 CABINET ACCESSORY ASSEMBLY

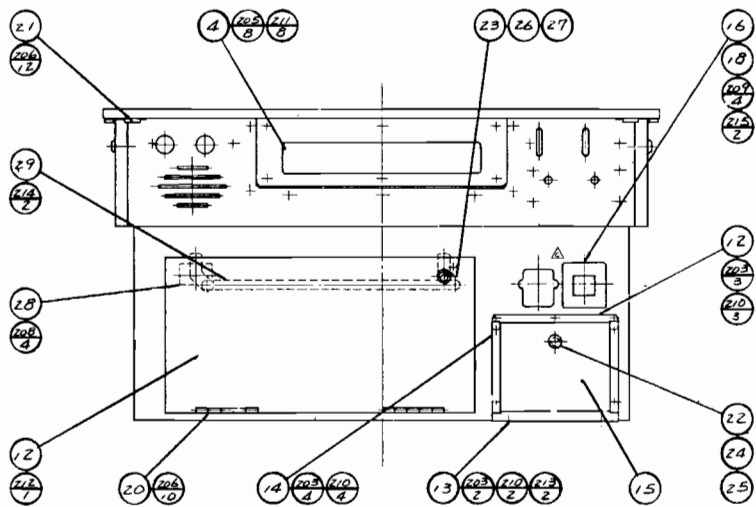
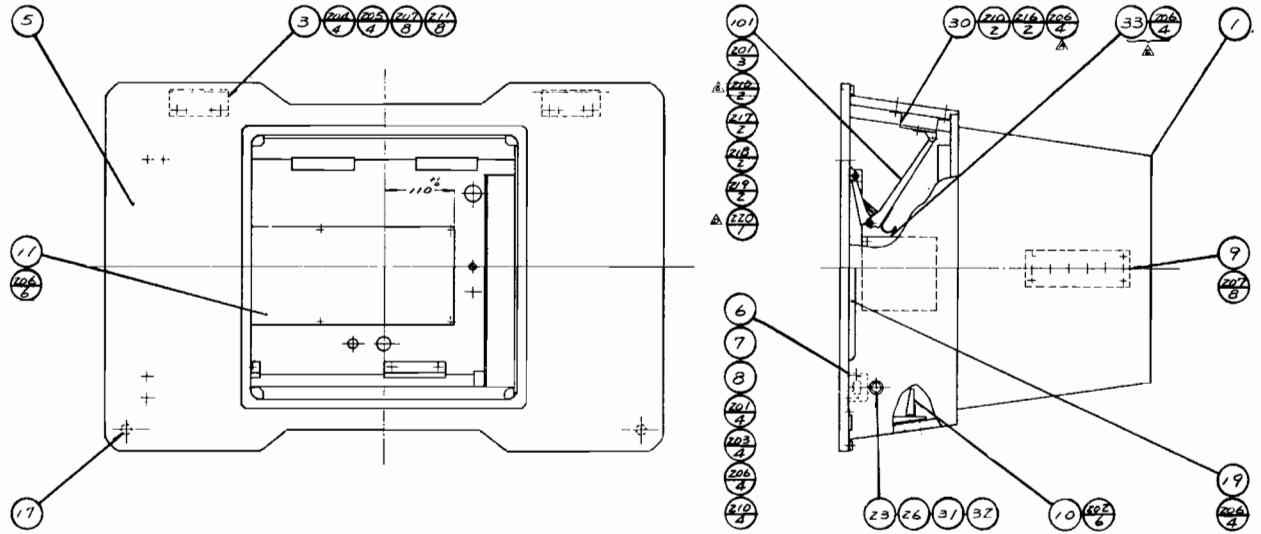
DRAWING NUMBER 834-0327

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>          |
|-----------------|-----------------|------------------|-----------------------------|
| 1               | 140-0074        | 1                | Wooden Cabinet, T8          |
| 2               | 601-0761        | 1                | Service Door                |
| 3               | 280-0451        | 2                | Hinge, 95                   |
| 4               | 105-0275        | 2                | Cabinet Support Bracket     |
| 5               | 601-0762        | 1                | Table                       |
| 6               | 102-0047        | 2                | Locking Base                |
| 7               | 105-0276        | 2                | Locking Bracket             |
| 8               | 280-0452        | 2                | Adjust Screw                |
| 9               | 117-0200        | 2                | Nut Plate                   |
| 10              | 109-0057        | 2                | TV Holder                   |
| 11              | 601-0763        | 1                | Net                         |
| 12              | 601-0698        | 1                | Door Protector A            |
| 13              | 601-0699        | 1                | Door Protector B            |
| 14              | 601-0700        | 1                | Door Protector C            |
| 15              | 220-0204        | 1                | Cash Box Door               |
| 16              | 601-0657        | 1                | Reject Cup Cover            |
| 17              | 601-0764        | 2                | Rubber Cushion              |
| 18              | 601-0416        | 1                | Reject Cup & Flap Door Assy |
| 19              | 140-0075        | 2                | Hole Cover                  |
| 20              | 280-0405        | 2                | Hinge, 95                   |
| 21              | 105-0198        | 4                | Hook Bracket                |
| 22              | 220-0097        | 1                | Cylinder Lock, L-S type     |
| 23              | 117-0062        | 3                | Lock Retainer Plate         |
| 24              | 601-0587        | 1                | Lock Tongue                 |
| 25              | 280-0453        | 1                | Spacer Ring                 |
| 26              |                 |                  |                             |
| 27              | 280-0454        | 1                | Locking Tongue              |
| 28              | 834-0328        | 1                | Locking Tongue Assy         |
| 29              |                 |                  |                             |
| 30              | 109-0058        | 1                | Stay Holder                 |
| 31              | 280-0463        | 2                | Locking Tongue              |
| 32              |                 |                  |                             |
| 33              | 117-0201        | 1                | Guard Plate                 |

## T8 CABINET ACCESSORY ASSEMBLY

DRAWING NUMBER 834-0327

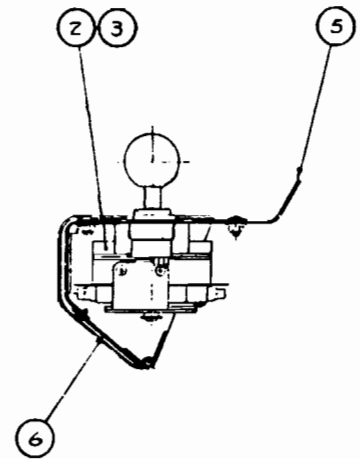
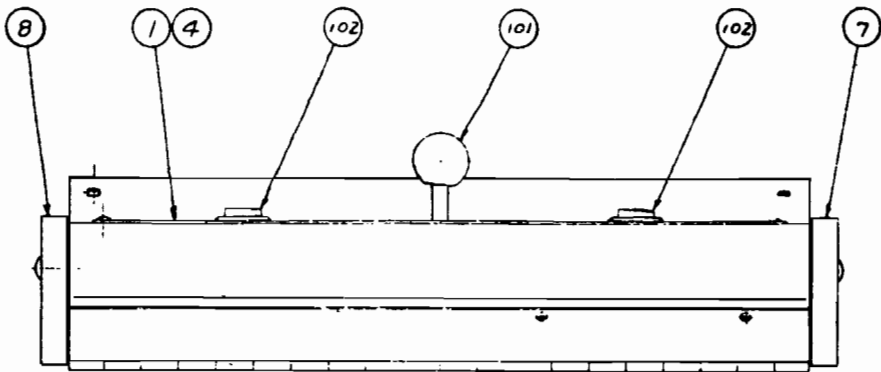
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>                      |
|-----------------|-----------------|------------------|---|
| 101             | 601-0765        | 1                | Stay                                    |
| 201             |                 | 7                | Screw, M4X10 PN.HD. PHIL                |
| 202             |                 | 6                | Screw, M5X10 PN.HD. PHIL                |
| 203             |                 | 13               | Bolt, Carriage, M4X20                   |
| 204             |                 | 4                | Bolt, Carriage, M5X20                   |
| 205             |                 | 12               | Bolt, Carriage, M5X25                   |
| 206             |                 | 44               | Screw, Wood, RND.HD. PHIL 3.5X13        |
| 207             |                 | 16               | Screw, Wood, RND.HD. PHIL 3.5X16        |
| 208             |                 | 4                | Screw, Wood, FLT.HD. PHIL 3.5X13        |
| 209             |                 | 4                | Screw, Wood, RND.HD. PHIL 3.1X13        |
| 210             |                 | 15               | Nut, Flange, M4                         |
| 211             |                 | 16               | Nut, Flange, M5                         |
| 212             |                 | 1                | Onime Nut, M4                           |
| 213             |                 | 2                | Washer, Flat, 44-16X16                  |
| 214             |                 | 2                | E Washer, 5mm                           |
| 215             |                 | 2                | Screw, PN.HD. PHIL M3X14                |
| 216             |                 | 2                | Bolt, Carriage, M4X25                   |
| 217             |                 | 2                | Screw, PN.HD. PHIL M4X18                |
| 218             |                 | 2                | Washer, Flat, M4                        |
| 219             |                 | 2                | Spring Washer, M4                       |
| 220             |                 | 1                | Screw, Tapping, #1, PN.HD. PHIL<br>4X14 |



## CONTROL PANEL ASSEMBLY

DRAWING NUMBER 834-0330

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>        |
|-----------------|-----------------|---------------------------|
| 1               | 117-0203        | Control Panel Plate       |
| 2               | 834-0331        | 8-Way Joystick Assembly   |
| 3               | 117-0164        | Slider Plate              |
| 4               |                 |                           |
| 5               | 102-0048        | Control Panel Base, Upper |
| 6               | 102-0049        | Control Panel Base, Lower |
| 7               | 601-0766        | Ornament Board, A         |
| 8               | 601-0767        | Ornament Board, B         |
| 101             | 109-0042        | Handle Ball, Red          |
| 102             | 509-0146        | Switch, Push Button, Red  |



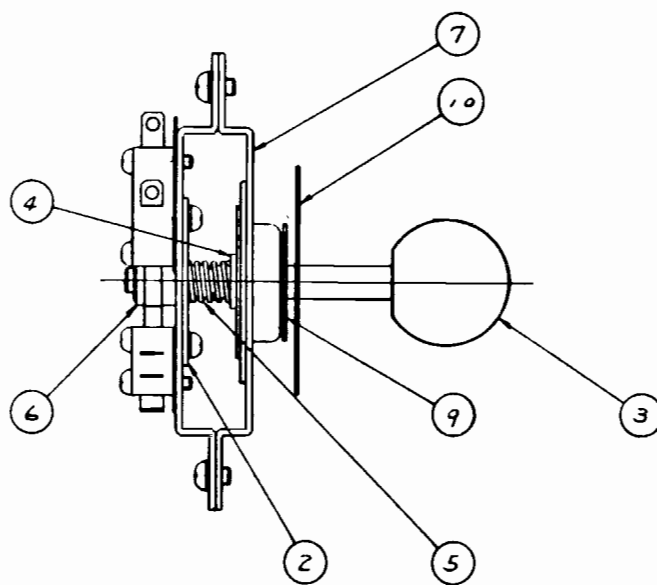
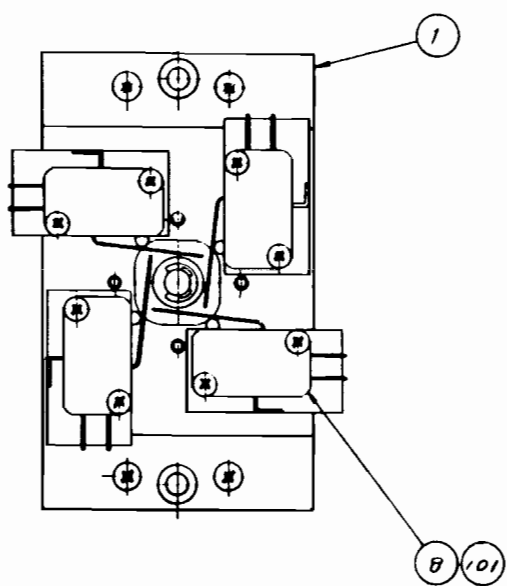
## 8-WAY JOYSTICK ASSEMBLY

DRAWING NUMBER 834-0031

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>         |
|-----------------|-----------------|----------------------------|
| 1               | 105-0277        | Bracket                    |
| 2               | 117-0204        | Guide Plate, 8-Way         |
| 3               | 834-0332        | Handle Assembly            |
| 4               | 601-0768        | Sleeve                     |
| 5               | 125-0102        | Compression Spring         |
| 6               | 104-0007        | Actuator                   |
| 7               | 834-0333        | Bracket w/Bearing Assembly |
| 8               |                 |                            |
| 9               | 117-0164        | Slider Plate               |
| 10              | 280-0455        | Plastic Washer             |
| 101             | 509-0131        | Switch, Micro-type         |

# 8-Way Joystick Assembly

834-0331

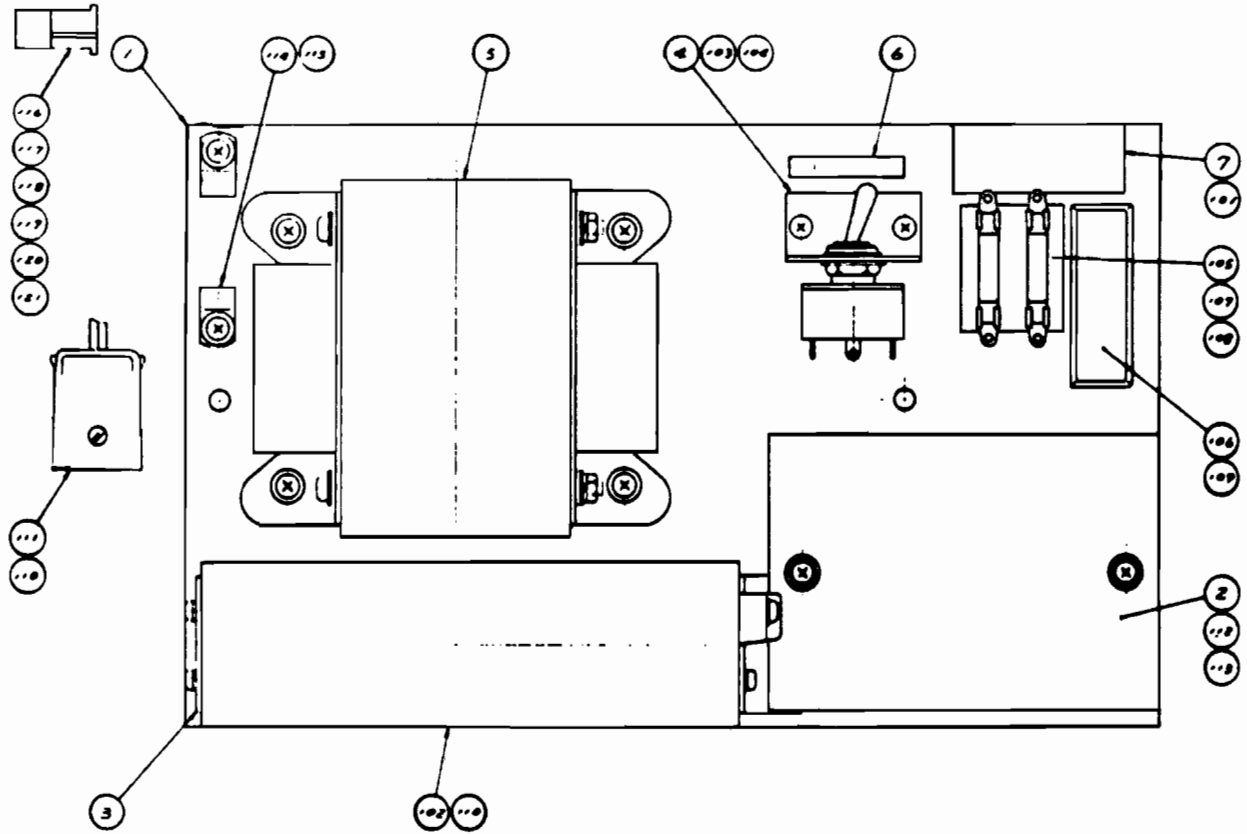


| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                 |
|-----------------|-----------------|------------------------------------|
| 1               |                 |                                    |
| 2               | 601-0612        | Regulator Unit                     |
| 3               |                 |                                    |
| 4               |                 |                                    |
| 5               | 560-0067        | Power Transformer, 90-240VAC       |
| 102             | 601-0158        | Switching Regulator, 100VAC, 5V 6A |
| 103             | 509-0115        | Switch Toggle, SP-DT, 15A          |
| 105             | 514-0046        | Fuse Holder, 1P, 125V 10A          |
| 106             | 514-0045        | Fuse Holder, w/Cover 250V 10A      |
| 107             | 514-0033        | Fuse, 1A                           |
| 108             | 514-0002        | Fuse, 3A                           |
| 109             | 514-0034        | Fuse, 5A                           |

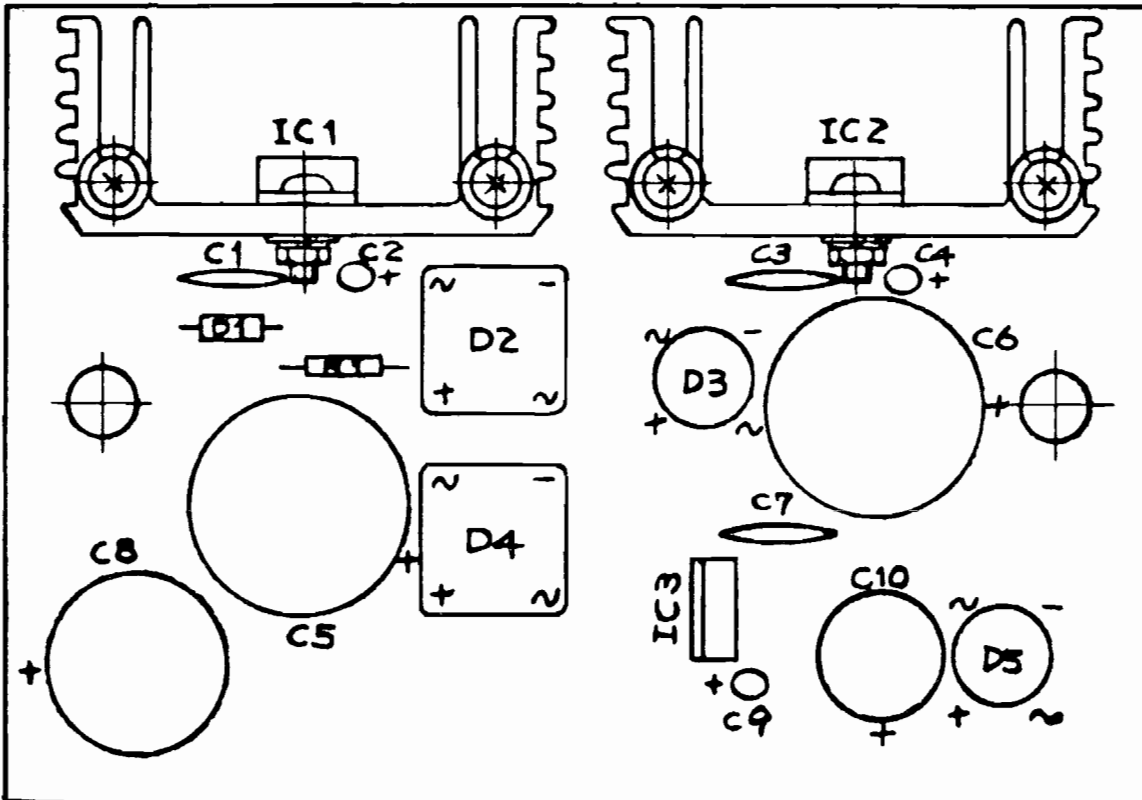


# Power Supply Assembly

834-0340



| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                          |
|-----------------|-----------------|---|
| 1               | 312-0070        | IC, $\mu$ A 78M12UC                         |
| 2               | 313-0014        | IC, $\mu$ A 7812UC                          |
| 3               | 312-0042        | IC, $\mu$ A 7805UC                          |
| 4               | 481-0042        | Rectifier, Silicon Diode                    |
| 5               | 481-0065        | Rectifier, Silicon Diode                    |
| 6               | 481-0049        | Rectifier, Silicon Diode                    |
| 7               | 150-0008        | Condenser, 2200 $\mu$ f, 25V                |
| 8               | 150-0182        | Condenser, 3300 $\mu$ f, 25V, CE04          |
| 9               | 150-0206        | Condenser, 3300 $\mu$ f, 16V, CE04          |
| 10              | 153-0002        | Condenser, 1 $\mu$ f, 25V, Solid Tantalum   |
| 11              | 151-0041        | Condenser, 0.1 $\mu$ f, 25V, Ceramic        |
| 12              | 470-0332        | Resistor, 3.3K, $\frac{1}{4}$ W, Solid Type |
| 13              | 150-0154        | Condenser, 470 $\mu$ f, 25V, CE04           |



## PCB ASSEMBLY

| <u>Part No.</u> | <u>Description</u>       | <u>Ref Des.</u> |
|-----------------|--------------------------|-----------------|
| Resistors       | R carbon 1/4 sb 680 Ohm  | R101            |
|                 | R carbon 1/4 sb 680 Ohm  | R102            |
|                 | R carbon 1/4 sb 2.2k Ohm | R103            |
|                 | R carbon 1/4 sb 390 Ohm  | R104            |
|                 | R carbon 1/4 sb 2.2k Ohm | R105            |
|                 | R carbon 1/4 sb 390 Ohm  | R106            |
|                 | R carbon 1/4 sb 1K Ohm   | R107            |
|                 | R carbon 1/4 sb 680 Ohm  | R111            |
|                 | R carbon 1/4 sb 780 Ohm  | R112            |
|                 | R carbon 1/4 sb 15K Ohm  | R113            |
|                 | R carbon 1/4 sb 390 Ohm  | R114            |
|                 | R carbon 1/4 sb 2.2K Ohm | R115            |
|                 | R carbon 1/4 sb 390 Ohm  | R116            |
|                 | R carbon 1/4 sb 1K Ohm   | R117            |
|                 | R carbon 1/4 sb 680 Ohm  | R121            |
|                 | R carbon 1/4 sb 680 Ohm  | R122            |
|                 | R carbon 1/4 sb 390 Ohm  | R124            |
|                 | R carbon 1/4 sb 2.2K Ohm | R125            |
|                 | R carbon 1/4 sb 390 Ohm  | R126            |
|                 | R carbon 1/4 sb 1K Ohm   | R127            |
|                 | R carbon 1/4 sb 10K Ohm  | R401            |
|                 | R carbon 1/4 sb 8.2K Ohm | R402            |
|                 | R carbon 1/4 sb 3.3K Ohm | R403            |
|                 | R carbon 1/4 sb 8.2K Ohm | R404            |
|                 | R carbon 1/2 sb 270 Ohm  | R405            |
|                 | R carbon 1/4 sb 10K Ohm  | R406            |
|                 | R carbon 1/4 sb 680 Ohm  | R407            |
|                 | R carbon 1/4 sb 2.2K Ohm | R408            |
|                 | R carbon 1/4 sb 12K Ohm  | R409            |
|                 | R carbon 1/4 sb 10K Ohm  | R410            |

| <u>Part No.</u>  | <u>Description</u>         | <u>Ref Des.</u> |
|------------------|----------------------------|-----------------|
| Resistors (cont) | R fuseable FMR1/4W 100 Ohm | R413            |
|                  | R carbon 1/4 sb 2.2K Ohm   | R414            |
|                  | R metal 10K Ohm            | R415            |
|                  | R fuseable FMR1/4C 22 Ohm  | R416            |
|                  | R cement RGB10H(V) 220 Ohm | R417            |
|                  | R metal 4.7K Ohm           | R418            |
|                  | R carbon 1/2 sb 2.2K Ohm   | R419            |
|                  | R carbon 1/4 sb 68K Ohm    | R421            |
|                  | R carbon 1/4 sb 6.8 Ohm    | R422            |
|                  | R carbon 1/4 sb 470 Ohm    | R423            |
|                  | R fuseable FMR1/4W         | R424            |
|                  | R carbon 1/2 sb 390 Ohm    | R425            |
|                  | R carbon 1/4 sb 6.8K Ohm   | R426            |
|                  | R fuseable FMR1/2W 1.2 Ohm | R427            |
|                  | R fuseable FMR2W 1.2 Ohm   | R428            |
|                  | R carbon 1/4 sb 330 Ohm    | R501            |
|                  | R carbon 1/4 sb 10K Ohm    | R502            |
|                  | R carbon 1/4 sb 10K Ohm    | R504            |
|                  | R carbon 1/4 sb 27k Ohm    | R505            |
|                  | R carbon 1/4 sb 390K Ohm   | R506            |
|                  | R carbon 1/4 sb 18K Ohm    | R507            |
|                  | R carbon 1/4 sb 68K Ohm    | R508            |
|                  | R carbon 1/4 sb 6.8K Ohm   | R509            |
|                  | R carbon 1/4 sb 10K Ohm    | R510            |
|                  | R carbon 1/4 sb 1.2K Ohm   | R511            |
|                  | R carbon 1/4 sb 470 Ohm    | R512            |
|                  | R metal RNL1/4 3.3K Ohm    | R513            |
|                  | R metal RNL1/4 560K Ohm    | R514            |
|                  | R metal 6.8K Ohm           | R515            |
|                  | R carbon 1/2 sb 8.2K Ohm   | R516            |
|                  | R metal 3.3K Ohm           | R517            |
|                  | R carbon 1/4 sb 8.2K Ohm   | R518            |

| <u>Part No.</u>  | <u>Description</u>            | <u>Ref Des.</u> |
|------------------|-------------------------------|-----------------|
| Resistors (cont) | R carbon 1/2 sb 4.7K Ohm      | R519            |
|                  | R carbon 1/2 sb 33 Ohm        | R520            |
|                  | R carbon 1/4 sb 10K Ohm       | R521            |
|                  | R fuseable FMR1/4W 330 Ohm    | R522            |
|                  | R fuseable FMR1/4W 330 Ohm    | R523            |
|                  | R fuseable FMR1/4W 330 Ohm    | R524            |
|                  | R fuseable FMR1/2 4.7 Ohm     | R525            |
|                  | R carbon 1/4 sb 22K Ohm       | R527            |
|                  | R carbon 1/4 sb 22K Ohm       | R528            |
|                  | R carbon 1/4 sb 680 Ohm       | R529            |
|                  | R carbon 1/4 sb 4.7K Ohm      | R530            |
|                  | R carbon 1/4 sb 470 Ohm       | R531            |
|                  | R carbon 1/4 sb 680 Ohm       | R532            |
|                  | R carbon 1/4 sb 47 Ohm        | R533            |
|                  | R fuseable FMR1/4W 330 Ohm    | R901            |
|                  | R carbon 1/4 sb 47K Ohm       | R902            |
|                  | R fuseable FMR1/4W 68 Ohm     | R903            |
|                  | R metal 15K Ohm               | R904            |
|                  | R carbon 1/4 sb 1M Ohm        | R905            |
|                  | R carbon 1/4 sb 15K Ohm       | R906            |
|                  | R carbon 1/4 sb 68K Ohm       | R907            |
|                  | R carbon 1/4 sb 68K Ohm       | R908            |
|                  | R carbon 1/4 sb 4.7K Ohm      | R909            |
|                  | R variable V8K4-1 5K Ohm      | RV101           |
|                  | R variable V8K4-1 5K Ohm      | RV102           |
|                  | R variable V8K4-1 5K Ohm      | RV103           |
|                  | R variable V8K4-1 5K Ohm      | RV104           |
|                  | R variable RVA0911H320-7-502M | RV404           |
|                  | R variable RVG0911H320-7-303M | RV402           |
|                  | R variable RVA0911H320-7-501M | RV403           |
|                  | R variable RVA0911H320-7-302M | RV501           |
|                  | R variable RVG0911H320-7-303M | RV502           |

| <u>Part No.</u>  | <u>Description</u>            | <u>Ref Des.</u> |
|------------------|-------------------------------|-----------------|
| Resistors (cont) | R variable RVG0911H320-7-303M | RV503           |
| Capacitors       |                               |                 |
|                  | C electro CE04 16V100(M)      | C101            |
|                  | C electro CE04 50V 1(M)       | C401            |
|                  | C polyester DEP50V 333K       | C402            |
|                  | C polyester DEP50V 333K       | C403            |
|                  | C tanta1 D 16V 2.2 uf K       | C404            |
|                  | C ceramic DD104-63B561K50V    | C405            |
|                  | C electro CE04 16V 470 (M)    | C406            |
|                  | C electro CE04 25V 10 (M)     | C407            |
|                  | C tanta1 D 25 10 uf K         | C408            |
|                  | C electro CE04 100V 10 (M)    | C409            |
|                  | C electro CE04 50V 1 (M)      | C410            |
|                  | C electro CE04 35V 220 (M)    | C411            |
|                  | C electro CE04 63V 470 (M)    | C412            |
|                  | C electro CE04 16V 470 (M)    | C413            |
|                  | C electro CE04 25V 10 (M)     | C414            |
|                  | C ceramic DD09]63B222K500V    | C415            |
|                  | C electro CE04 100V 10 (M)    | C416            |
|                  | C electro CE04 35V 220 (M)    | C417            |
|                  | C electro CE04 160V 22 (M)    | C418            |
|                  | C ceramic DD09-63B222K500V    | C419            |
|                  | C electro CE04 25V 10 (M)     | C501            |
|                  | C electro CE04 25V 10 (M)     | C502            |
|                  | C electro CE04 50V 1 (M)      | C503            |
|                  | C ceramic DD105-63E222P50V    | C504            |
|                  | C electro CE04 50V 1 (M)      | C505            |
|                  | C polyester DEP 50V 473K      | C506            |
|                  | C polyester DEP 50V 473K      | C507            |
|                  | C polypro DTW100V 562-G       | C508            |
|                  | C electro CE04 50V 1 (M)      | C510            |
|                  | C electro CE04 16V 220 (M)    | C511            |

| <u>Part No.</u>   | <u>Description</u>               | <u>Ref Des.</u> |
|-------------------|----------------------------------|-----------------|
| Capacitors (Cont) | C ceramic DD05-63B561K500V       | C512            |
|                   | C ceramic DD10 63E472P500V       | C513            |
|                   | C ceramic DE1510R 222K           | C514            |
|                   | C ceramic DE1510R 222K           | C515            |
|                   | C ceramic DE1410R 182K           | C516            |
|                   | C ceramic DE1110R 821K           | C517            |
|                   | C ceramic DD104-63B821K 50V      | C518            |
|                   | C polipro DTW200VDC 0.47 uf M    | C520            |
|                   | C electro CE04 50V 47 (M)        | C523            |
|                   | C electro CE04 160V 47 (M)       | C524            |
|                   | C ceramic DD09-63B222K500V       | C525            |
|                   | C electro CE04 160V 1 (M)        | C526            |
|                   | C electro CE04 160V 10 (M)       | C527            |
|                   | C polypro DTW630VDC 0.01 uf - M  | C528            |
|                   | C electro CE04 25V 10 (M)        | C529            |
|                   | C polypro UL LHX125VAC 0.1 uf    | C901            |
|                   | C ceramic MVDE0807E222ZAC250V    | C902            |
|                   | C ceramic MVDE0807E222ZAC250V    | C903            |
|                   | C ceramic DD09-63B 22K 500V      | C904            |
|                   | C electro RPE 180V (300) 680 (M) | C905            |
|                   | C electro CE04 160V 22 (M)       | C906            |
|                   | C ceramic DD05-63B 221K 500V     | C907            |
| Coils             |                                  |                 |
| 180-0033          | L choke                          | L401            |
| 181-0034          | L choke                          | L501            |
| 180-0032          | L choke                          | L502            |
| 181-0033          | L linear                         | L503            |
| 181-0032          | L size                           | L504            |
| 180-0031          | L choke                          | L505            |
| 180-0030          | L choke                          | L506            |
| 180-0029          | L choke                          | L507            |
| 180-0028          | L choke                          | L901            |



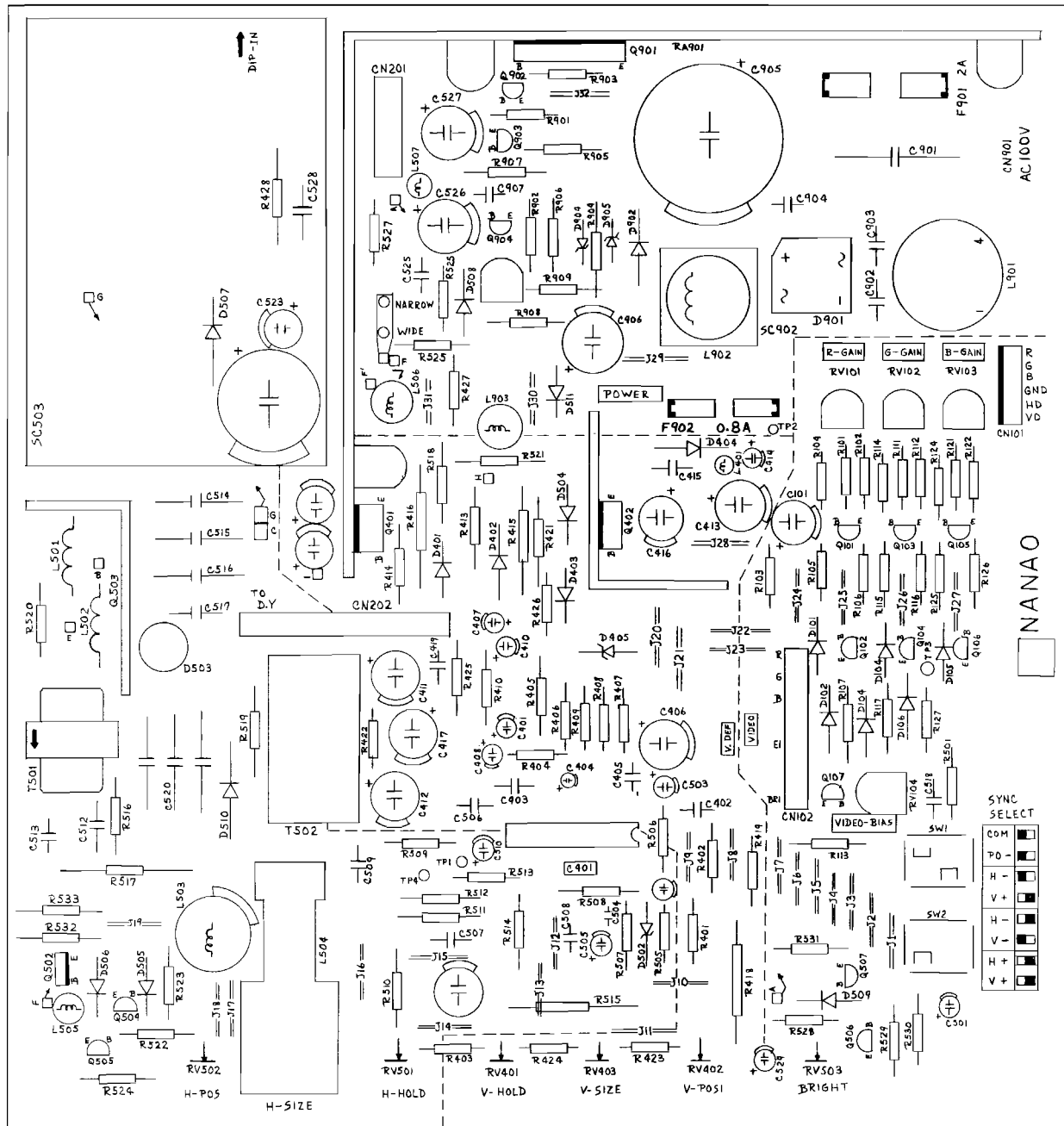
| <u>Part No.</u> | <u>Description</u> | <u>Ref Des.</u> |
|-----------------|--------------------|-----------------|
| 180-0027        | L choke            | L902            |
| 180-0026        | L choke            | L903            |
| Transformers    |                    |                 |
| 560-0102        | T H drive          | T501            |
| 560-0101        | T pin corr         | T502            |
| 560-0100        | T FBT MSH1FAC02    | T503            |
| Diodes          |                    |                 |
| 481-0164        | Diode 1S1588       | D101            |
| 481-0164        | Diode 1S1588       | D102            |
| 481-0164        | Diode 1S1588       | D103            |
| 481-0164        | Diode 1S1588       | D104            |
| 481-0164        | Diode 1S1588       | D105            |
| 481-0164        | Diode 1S1588       | D106            |
| 481-0164        | Diode 1S1588       | D401            |
| 481-0234        | Diode 1S1886       | D402            |
| 481-0175        | Diode 1S2076A      | D403            |
| 481-0119        | Diode RU2          | D404            |
| 481-0233        | Diode EQA01-24     | D405            |
| 481-0164        | Diode 1S1588       | D501            |
| 481-0137        | D zener EQA01-07S  | D502            |
| 481-0164        | Diode 1S1588       | D504            |
| 481-0175        | Diode 1S2076A      | D505            |
| 481-0175        | Diode 1S2067A      | D506            |
| 481-0119        | Diode RU2          | D507            |
| 481-0232        | Diode S5295G       | D508            |
| 481-0164        | Diode 1S1588       | D509            |
| 481-0232        | Diode S5295G       | D510            |
| 481-0164        | Diode 1S1588       | D511            |
| 481-0137        | Diode EQA01-07S    | D512            |
| 481-0235        | D bridge 3D4B41    | D901            |
| 481-0119        | Diode RU2          | D902            |
| 481-0137        | D zener EQA01-07S  | D904            |

| <u>Part No.</u> | <u>Description</u> | <u>Ref Des.</u> |
|-----------------|--------------------|-----------------|
| 481-0137        | D zener EQA01-07S  | D905            |
| Transistors     |                    |                 |
| 482-0261        | Transistor 2SC1740 | Q101            |
| 482-0261        | Transistor 2SC1740 | Q102            |
| 482-0261        | Transistor 2SC1740 | Q103            |
| 482-0261        | Transistor 2SC1740 | Q104            |
| 482-0261        | Transistor 2SC1740 | Q105            |
| 482-0261        | Transistor 2SC1740 | Q106            |
| 482-0111        | Transistor 2SA673  | Q107            |
| Miscellaneous   |                    |                 |
|                 | Connector          | CN201           |
|                 | Connector          | CN202           |
|                 | Connector          | CN203           |
|                 | Assy accord        | CD901           |
|                 | Connector          | CN901           |
| 510-0068        | Switch SSA042      | SW1             |
| 510-0068        | Switch SSA042      | SW2             |
|                 | Pin terminal       | TP1             |
|                 | Pin terminal       | TP2             |
|                 | Pin terminal       | TP3             |
|                 | Pin terminal       | TP4             |
| Transistors     |                    |                 |
| 482-0276        | Transistor 2SD1138 | Q401            |
| 482-0276        | Transistor 2SD1138 | Q402            |
| 482-0261        | Transistor 2SC1740 | Q501            |
| 482-0257        | Transistor 2SC2688 | Q502            |
| 482-0198        | Transistor 2SD870  | Q503            |
| 482-0201        | Transistor 2SD763  | Q504            |
| 482-0201        | Transistor 2SD763  | Q505            |
| 482-0111        | Transistor 2SA673  | Q506            |
| 482-0111        | Transistor 2SA673  | Q507            |
|                 | Transistor 2SC2555 | Q901            |

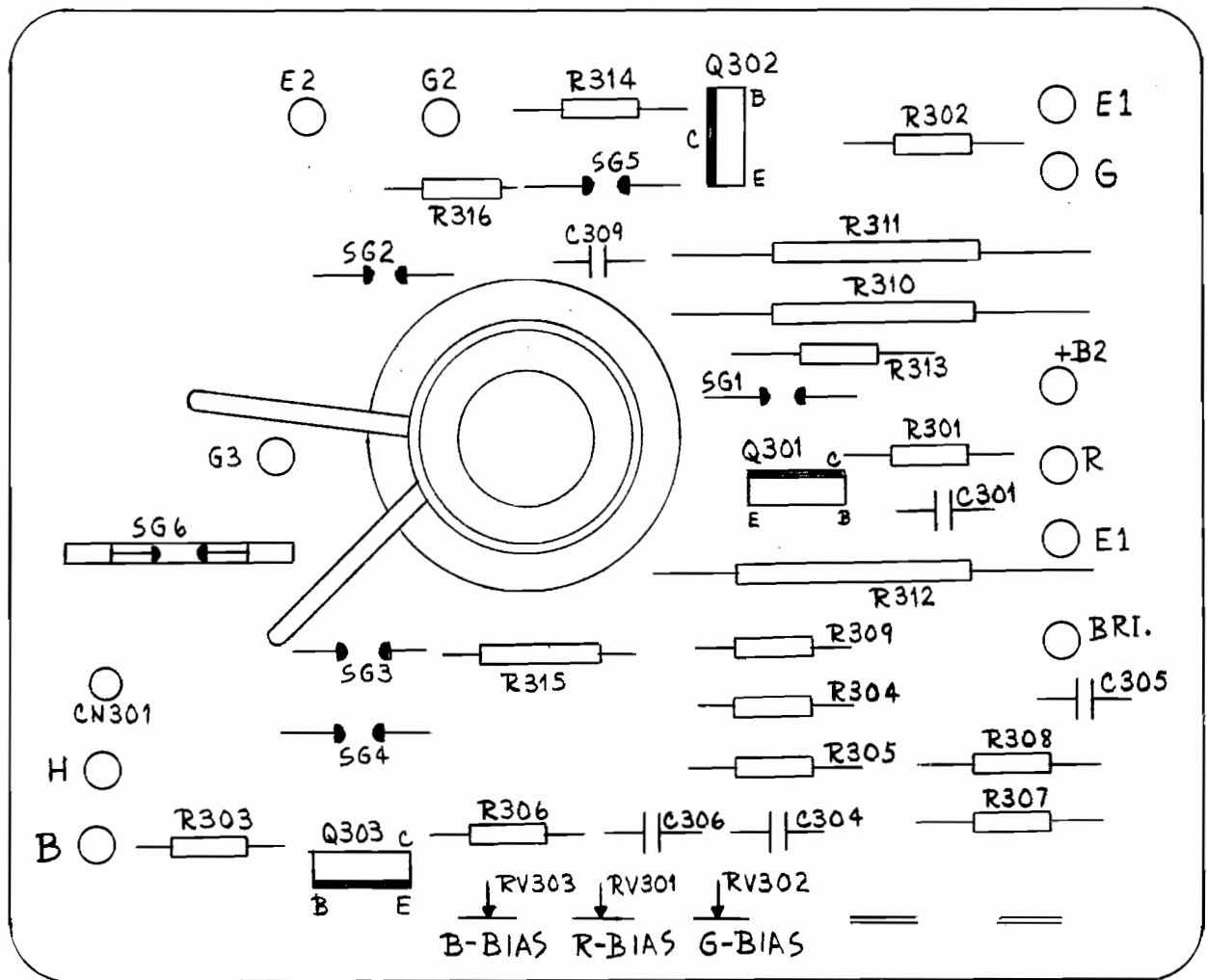
| <u>Part No.</u> | <u>Description</u>       | <u>Ref. Des.</u> |
|-----------------|--------------------------|------------------|
| 482-0273        | Transistor 2SA1091       | Q902             |
| 482-0167        | Transistor 2SC2482       | Q903             |
| 482-0167        | Transistor 2SC2482       | Q904             |
| Miscellaneous   |                          |                  |
| 313-0051        | I C HA11235              | IC401            |
|                 | Connector                | CN101            |
|                 | Connector                | CN102            |
|                 | Fuse                     | F901             |
|                 | Fuse clip                | CF901            |
|                 | Fuse                     |                  |
|                 | Fuse clip                |                  |
|                 | Shield case              |                  |
| 560-0098        | Assy tr (v-out)          |                  |
| 560-0099        | Assy tr (h-out)          |                  |
| 200-0081        | Assy radiator A          |                  |
| NECK BOARD PCB  |                          |                  |
| Resistors       |                          |                  |
|                 | R carbon 1/4 sb 220 Ohm  | R301             |
|                 | R carbon 1/4 sb 220 Ohm  | R302             |
|                 | R carbon 1/4 sb 220 Ohm  | R303             |
|                 | R carbon 1/4 sb 1.2K Ohm | R304             |
|                 | R carbon 1/4 sb 1.2K Ohm | R305             |
|                 | R carbon 1/4 sb 1.2K Ohm | R306             |
|                 | R carbon 1/4 sb 330 Ohm  | R307             |
|                 | R carbon 1/4 sb 330 Ohm  | R308             |
|                 | R carbon 1/4 sb 330 Ohm  | R309             |
|                 | R metal 8.2K Ohm         | R310             |
|                 | R metal 8.2K Ohm         | R311             |
|                 | R metal 8.2K Ohm         | R312             |
|                 | R solid 1/2 2.2K Ohm     | R313             |
|                 | R solid 1/2 2.2K Ohm     | R314             |
|                 | R solid 1/2 2.2K Ohm     | R315             |

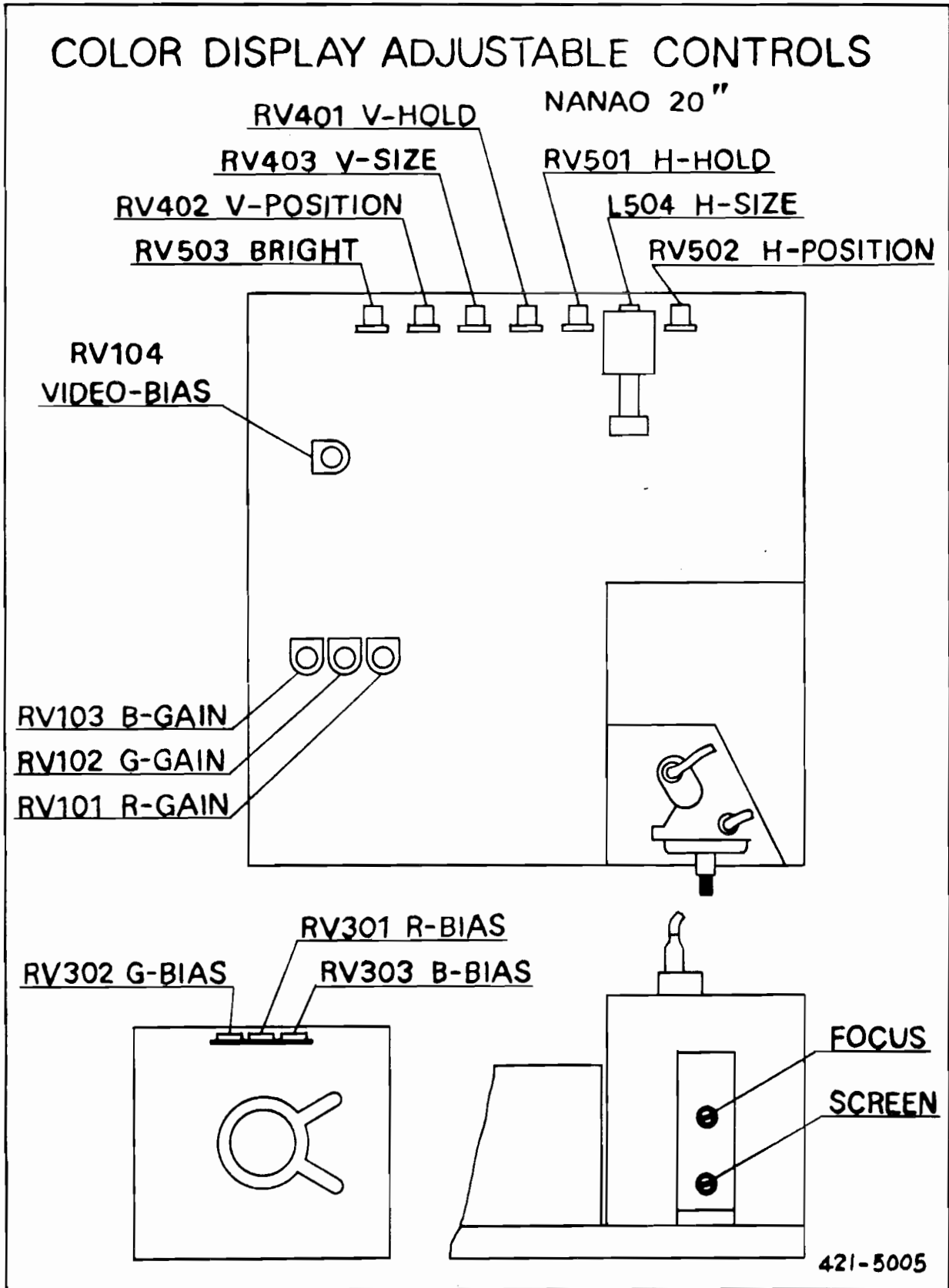
| <u>Part No.</u>  | <u>Description</u>                | <u>Ref. Des.</u> |
|------------------|-----------------------------------|------------------|
| Resistors (cont) | R solid 1/2 1M Ohm                | R316             |
|                  | R variable RVA0911H-306-1 5K Ohm  | RV301            |
|                  | R variable RVA0911H-306-2 5K Ohm  | RV302            |
|                  | R variable RVA0911H-306-3 5K Ohm  | RV303            |
|                  | R variable RVA0911H-306-7 220 Ohm | RV304            |
|                  | R variable RVA0911H-306-7 220 Ohm | RV305            |
| Capacitors       |                                   |                  |
|                  | C ceramic DD104-63B 271K 50V      | C304             |
|                  | C ceramic DD104-63B 271K 50V      | C305             |
|                  | C ceramic DD104-63B 271K 50V      | C306             |
|                  | C ceramic DE0705-B 102K 1KV       | C309             |
| Transistors      |                                   |                  |
| 482-0257         | Transistor 2SC2688                | Q301             |
| 482-0257         | Transistor 2SC2688                | Q302             |
| 482-0257         | Transistor 2SC2688                | Q303             |

ASSY MAIN PC BOARD, NANA0-200 0039

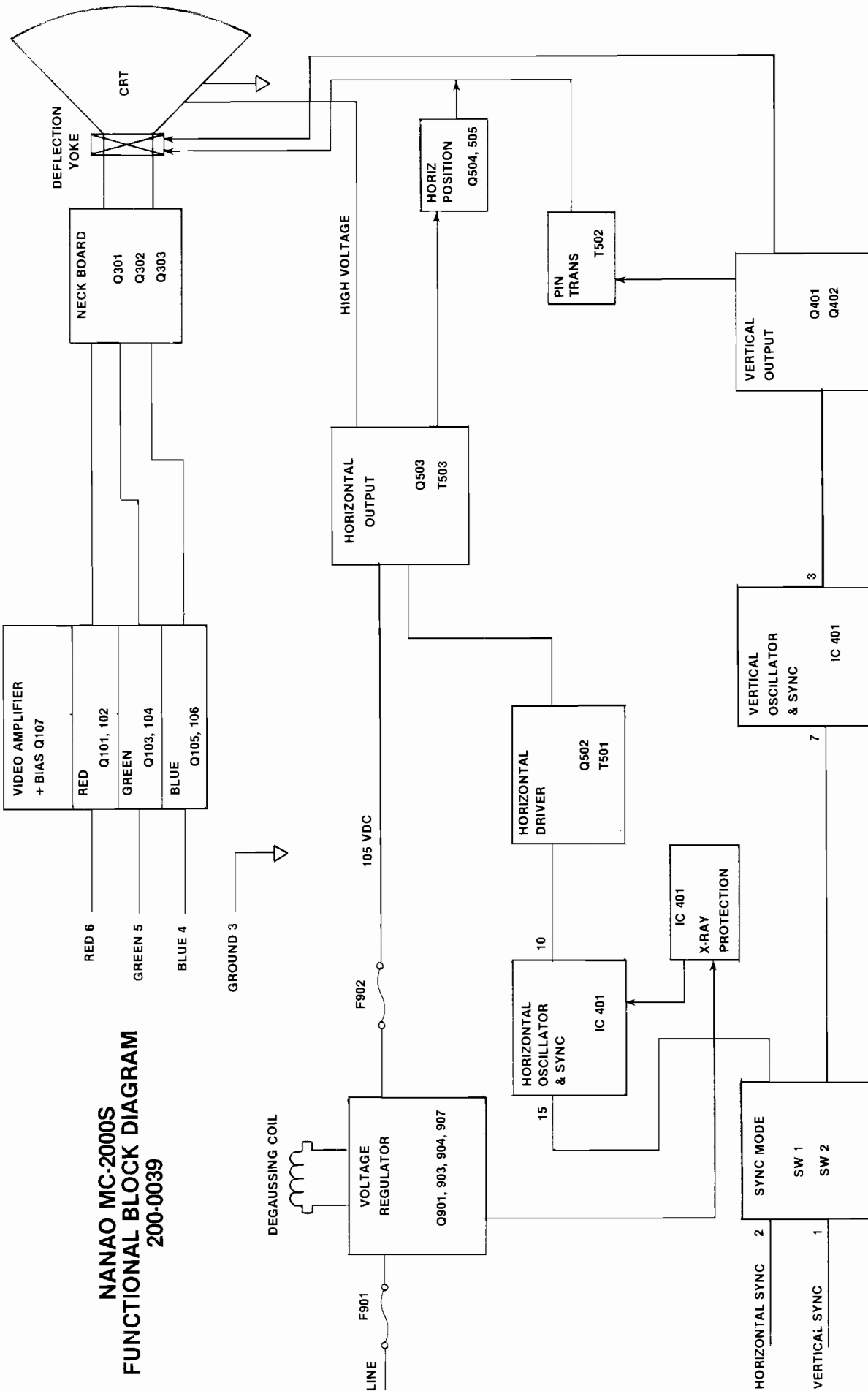


ASSY, NECKBOARD  
NANA0 200 0039





# NANA0 MC-2000S FUNCTIONAL BLOCK DIAGRAM 200-0039





**700-0138 Top Assembly**

**700-0139 Top Assembly**

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>         |
|-----------------|-----------------|-----------------------------|----------------------------|
| 1               | 130-0002-00     | 1                           | Speaker Cover 6 x 9        |
| 2               | 130-0020-00     | 1                           | Speaker 6 x 9, 8 OHM, 10W  |
| 3               | 140-0021 00     | 1                           | Cover Junction Box         |
| 4               | 140-0071-00     | 1                           | Cabinet Universal Game     |
| 5               |                 |                             |                            |
| 6               |                 |                             |                            |
| 7               | 220-0008-00     | 1                           | Counter Digital 6V         |
| 8               | 220-0178-00     | 2                           | Draw Catch                 |
| 9               | 220-0194-00     | 2                           |                            |
|                 | or 220-0195-00  |                             | Coin Mech W/Lamp           |
| 10              |                 |                             |                            |
| 11              | 250-0497-00     | 2                           | Clamp, Component BD UNIV   |
| 12              | 250-0038-00     | 1                           | Moulding Strip             |
| 13              | 250-0492-00     | 1                           | Moulding logo              |
| 14              |                 |                             |                            |
| 15              | 253-0222-00     | 2                           | Coin Receptacle            |
| 16              | 253-0238-00     | 1                           | Plastic Bag 3.00 x 4.00    |
| 17              | 253-0254-00     | 1                           | Mask CRT 19 IN             |
| 18              | 253-0228-00     | 1                           | Monitor Panel Clear        |
| 19              | 253-0284-00     | 1                           | Bezel Plastic CRT Vertical |
| 20              | 253-0328-00     | 1                           | Panel logo                 |
| 21              |                 |                             |                            |
| 22              |                 |                             |                            |
| 23              | 260-0001-00     | 1                           | Fan Axial Cooling          |
| 24              |                 |                             |                            |
| 25              |                 |                             |                            |
| 26              | 280-0005-00     | 40                          | Cable Tie                  |
| 27              | 280-0362-00     | 2                           | Electrical Crimp Sleeve    |
| 28              | 280-0475-00     | 30                          | Staple                     |
| 29              | 280-0495-00     | 1                           | Spring, CPRSN .360 OD      |
| 30              |                 |                             |                            |

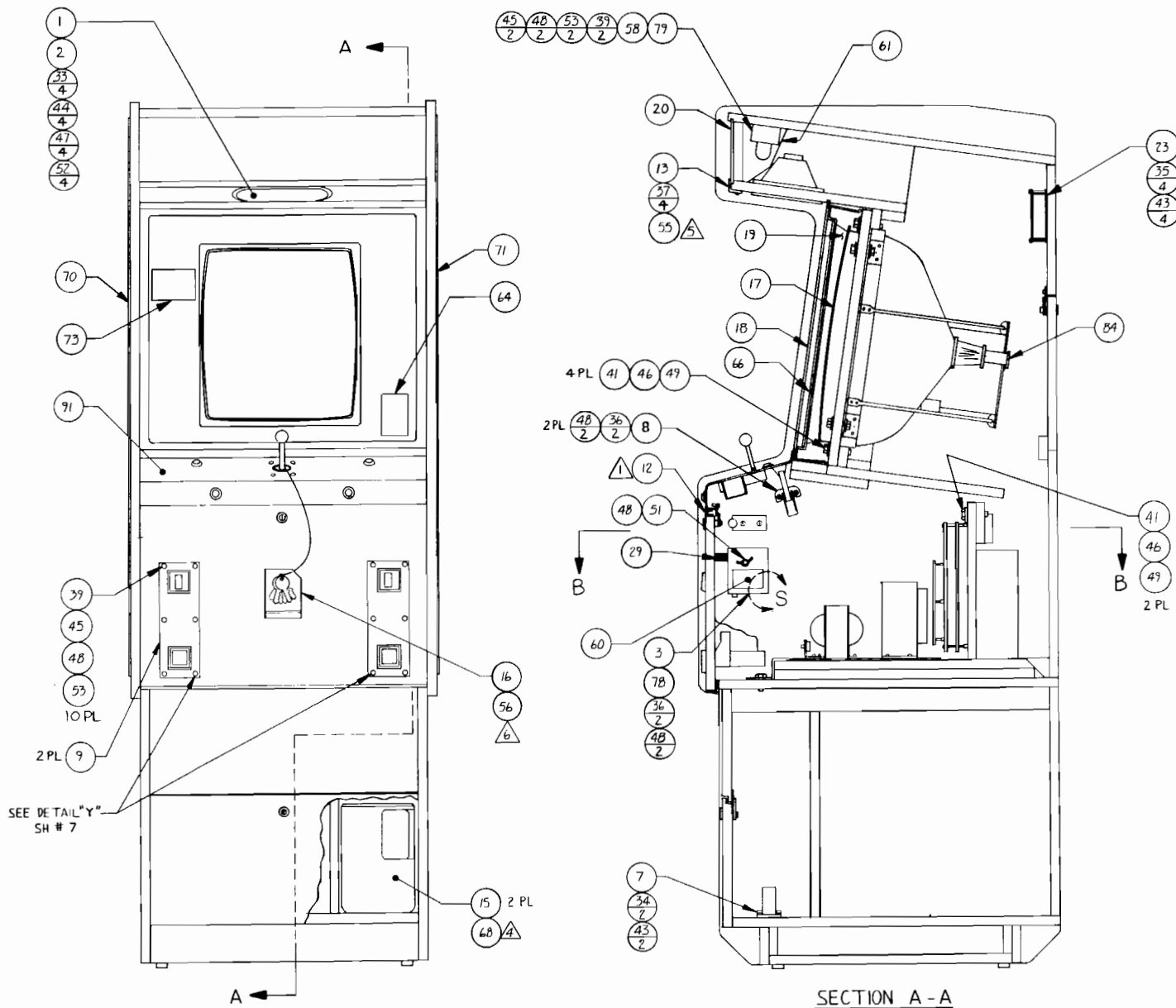
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>                |
|-----------------|-----------------|-----------------------------|-----------------------------------|
| 31              | 281-0004-12     | 1                           | SCR, 8-32 x .750 PN HD PHIL       |
| 32              | 281-0006-08     | 1                           | SCR 10-32 x .500 PN HD PHIL       |
| 33              | 281-0014-28     | 4                           | SCR 8-32 x 1.75 OVH PHIL          |
| 34              | 281-0042-12     | 2                           | SCR 6-20 x .750 PN HD PHIL        |
| 35              | 281-0042-32     | 4                           | SCR 6-20 x 2.00 PN HD PHIL        |
| 36              | 281-0045-12     | 6                           | SCR 10-16 x .750 PN HD PHIL       |
| 37              | 281-0134-12     | 4                           | SCR 8-18 x .750 PN HD PHIL, Black |
| 38              |                 |                             |                                   |
| 39              | 282-0005-20     | 14                          | Bolt, 10-24 x 1.25 CRG HD, Black  |
| 40              | 282-0017-16     | 4                           | Bolt, 1/4-20 x 1.00 HEX HD        |
| 41              | 282-0017-24     | 4                           | Bolt, 1/4-20 x 1.50 HEX HD        |
| 42              |                 |                             |                                   |
| 43              | 283-0060-18     | 6                           | Washer #6 Flat, STL               |
| 44              | 283-0060-22     | 6                           | Washer #8 Flat, STL               |
| 45              | 283-0060-24     | 14                          | Washer #10 Flat, STL              |
| 46              | 283-0060-34     | 6                           | Washer #1/4 Flat, STL             |
| 47              | 282-0061-05     | 5                           | Washer #8 Lock, Split, STL        |
| 48              | 283-0061-06     | 21                          | Washer #10 Lock, Split, STL       |
| 49              | 283-0061-08     | 6                           | Washer #1/4 Lock, Split, STL      |
| 50              |                 |                             |                                   |
| 51              | 283-0071-14     | 1                           | Nut 10-24 Wing, STL               |
| 52              | 283-0072-13     | 5                           | Nut 8-32 HEX                      |
| 53              | 283-0072-15     | 14                          | Nut 10-24 HEX                     |
| 54              |                 |                             |                                   |
| 55              | 320-0020-00     | 2'                          | Sealant Foam                      |
| 56              | 320-0051-00     | 1'                          | Tie Ribbon Wire Plastic Coated    |
| 57              |                 |                             |                                   |
| 58              | 390-0019-00     | 1                           | Lamp Fluorescent                  |
| 59              |                 |                             |                                   |
| 60              | 420-0030-00     | 1                           | Decal Caution 115V                |
| 61              | 420-0624-00     | 1                           | Light Baffle                      |

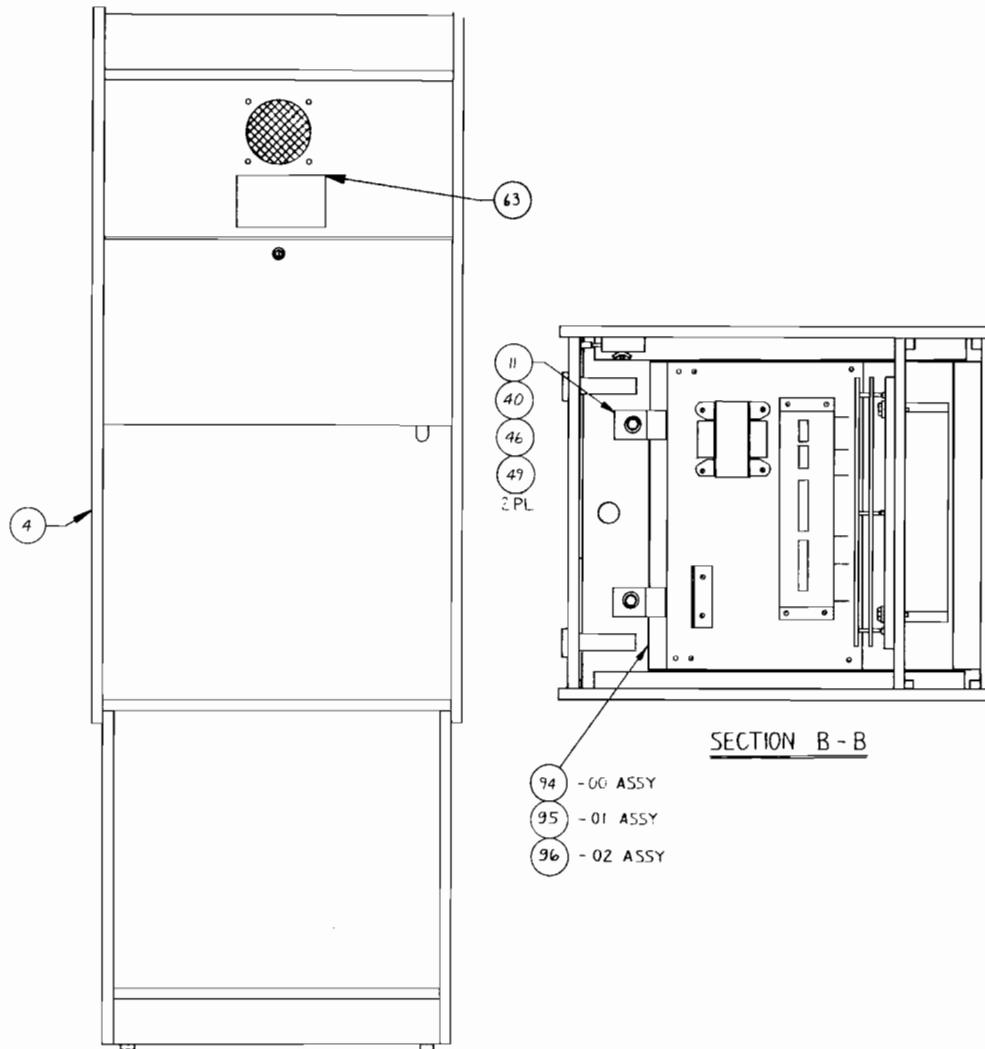
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>         |
|-----------------|-----------------|-----------------------------|----------------------------|
| 62              | 420-0793-00     | 1                           | Decal Toll Free No.        |
| 63              | 420-0912-00     | 1                           | Decal FCC Rules Compliance |
| 64              | 420-0914-07     | 1                           | Decal Original Game Seal   |
| 65              | 420-0917-00     | 1                           | Decal FCC Warning          |
| 66              | 420-0977-00     | 1                           | Graphic Interior           |
| 67              | 420-0978-00     | 1                           | Decal, Box                 |
| 68              | 420-0979-00     | 1                           | Manual                     |
| 69              | 420-0982-00     | 1                           | Decal Dip SW Settings      |
| 70              | 420-0994-00     | 1                           | Graphic Side Left          |
| 71              | 420-0993-00     | 1                           | Graphic Side Right         |
| 72              | 420-1006-00     | 1                           | New Game Card              |
| 73              | 420-1007-00     | 1                           | Decal, Game Instructions   |
| 74              |                 |                             |                            |
| 75              |                 |                             |                            |
| 76              |                 |                             |                            |
| 77              |                 |                             |                            |
| 78              | 800-0145-00     | 1                           | Assy AC Junction Box       |
| 79              | 800-0147-01     | 1                           | Fluorescent Lamp Assy 2    |
| 80              | 800-0232-00     | 1                           | Assy Harn. GND             |
| 81              | 800-0322-00     | 1                           | Assy Cord Fan              |
| 82              | 800-0329-00     | 1                           | Assy Harn. Monitor AC      |
| 83              | 800-0330-00     | 1                           | Assy Harn. GND Monitor     |
| 84              | 800-0362-00     | 1                           | Assy Monitor CLR Vertical  |
| 85              | 800-0370-00     | 1                           | GND Strap                  |
| 86              | 800-0371-00     | 1                           | Assy Speaker Harn.         |
| 87              | 800-0372-00     | 1                           | Harn. Coin Mech            |
| 88              |                 |                             |                            |
| 89              |                 |                             |                            |
| 90              |                 |                             |                            |
| 91              | 800-3396-00     | 1                           | Control Panel Assy         |
| 92              |                 |                             |                            |

TOP ASSEMBLY

DRAWING NUMBER 700-0138

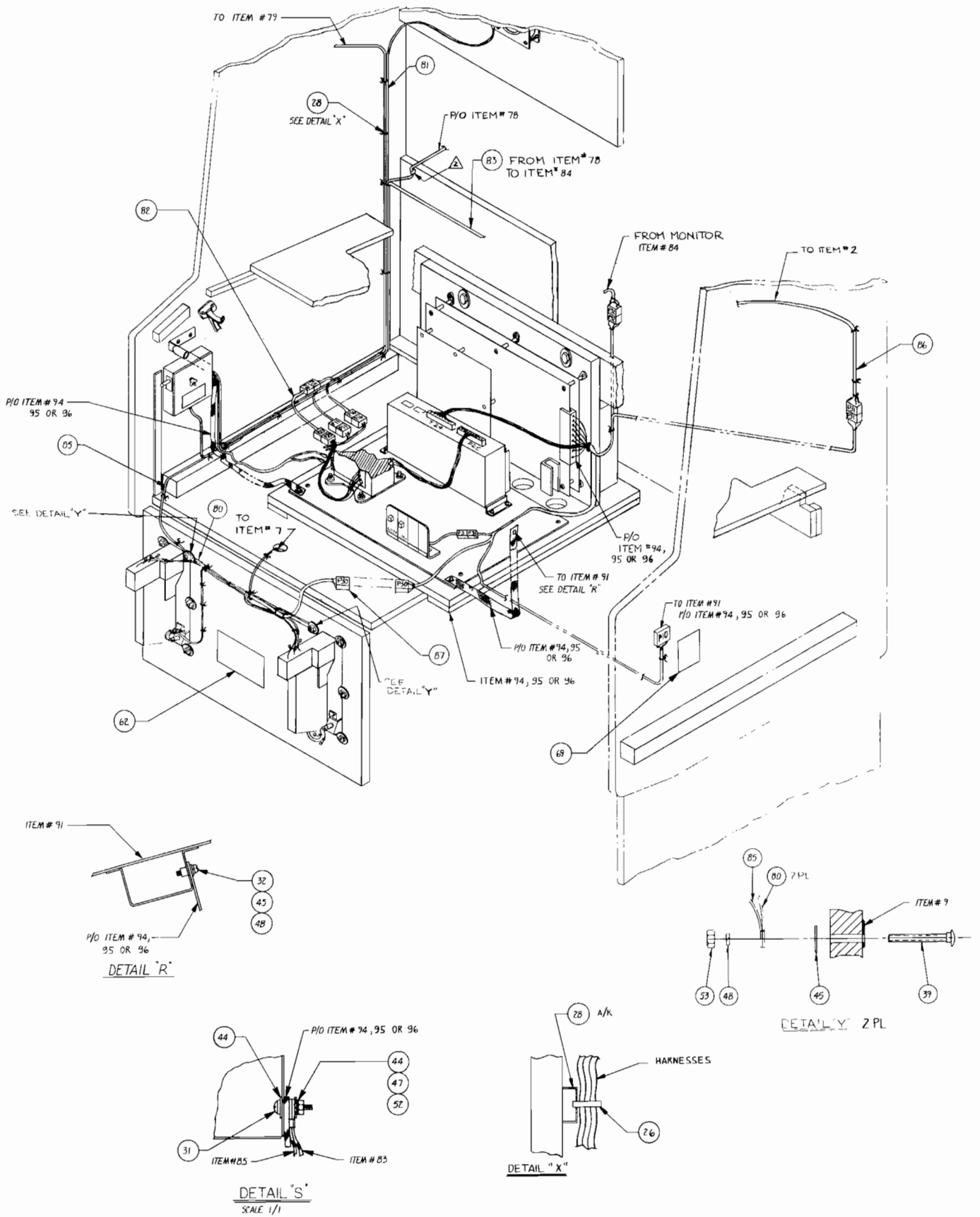
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u>  |     |     | <u>DESCRIPTION</u>    |
|-----------------|-----------------|--------------|-----|-----|-----------------------|
|                 |                 | <u>REQD.</u> |     |     |                       |
|                 |                 | -00          | -01 | -02 |                       |
| 93              |                 |              |     |     |                       |
| 94              | 800-3401-00     | 1            | -   | -   | Assy, Component Shelf |
| 95              | 800-3401-01     | -            | 1   | -   | Assy, Component Shelf |
| 96              | 800-3401-02     | -            | -   | 1   | Assy, Component Shelf |
|                 | 420-0780-00     | REF          |     |     | Game Shipping Kit     |





# Top Assembly

700-0138





| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>         |
|-----------------|-----------------|-----------------------------|----------------------------|
| 1               | 130-0002-00     | 1                           | Speaker Cover 6 x 9        |
| 2               | 130-0020-00     | 1                           | Speaker 6 x 9, 8 OHM, 10W  |
| 3               | 140-0021 00     | 1                           | Cover Junction Box         |
| 4               | 140-0071-00     | 1                           | Cabinet Univ. I            |
| 5               |                 |                             |                            |
| 6               |                 |                             |                            |
| 7               | 220-0008-00     | 1                           | Counter Digital 6V         |
| 8               | 220-0178-00     | 2                           | Draw Catch                 |
| 9               | 220-0194-00     | 2                           |                            |
|                 | or 220-0195-00  |                             | Coin Mech W/Lamp           |
| 10              |                 |                             |                            |
| 11              | 250-0497-00     | 2                           | Clamp, Component BD        |
| 12              | 250-0038-00     | 1                           | Moulding Strip             |
| 13              | 250-0492-00     | 1                           | Moulding logo              |
| 14              |                 |                             |                            |
| 15              | 253-0222-00     | 2                           | Coin Receptacle            |
| 16              | 253-0238-00     | 1                           | Plastic Bag 3.00 x 4.00    |
| 17              | 253-0254-00     | 1                           | Mask CRT 19 IN             |
| 18              | 253-0228-00     | 1                           | Monitor Panel Clear        |
| 19              | 253-0284-00     | 1                           | Bezel Plastic CRT Vertical |
| 20              | 253-0328-00     | 1                           | Panel logo                 |
| 21              |                 |                             |                            |
| 22              |                 |                             |                            |
| 23              | 260-0001-00     | 1                           | Fan Axial Cooling          |
| 24              |                 |                             |                            |
| 25              |                 |                             |                            |
| 26              | 280-0005-00     | 40                          | Cable Tie                  |
| 27              | 280-0362-00     | 2                           | Electrical Crimp Sleeve    |
| 28              | 280-0475-00     | 30                          | Staple                     |
| 29              | 280-0495-00     | 1                           | Spring, CPRSN .360 OD      |

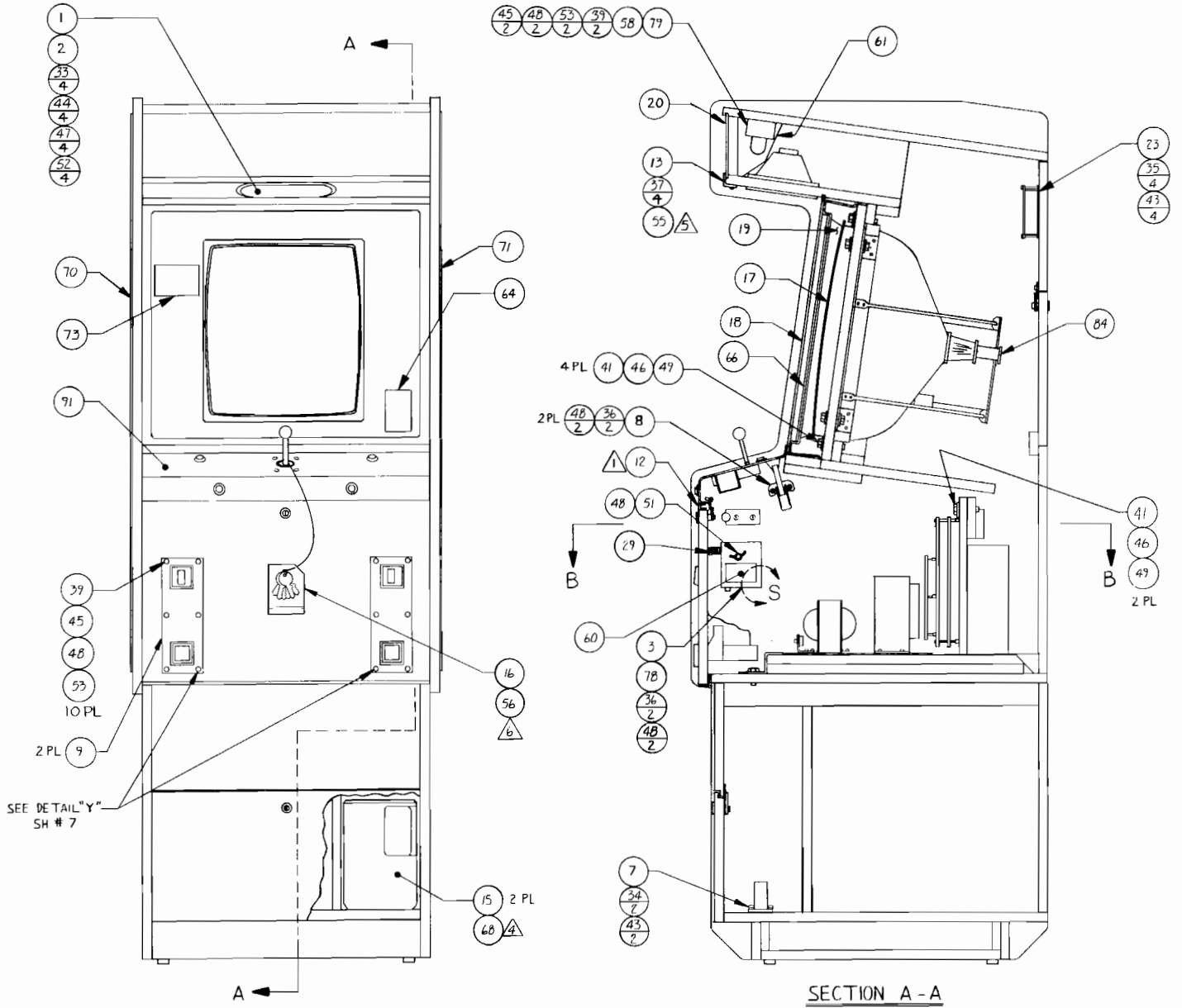
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>                |
|-----------------|-----------------|-----------------------------|-----------------------------------|
| 30              |                 |                             |                                   |
| 31              | 281-0004-12     | 1                           | SCR, 8-32 x .750 PN HD PHIL       |
| 32              | 281-0006-08     | 1                           | SCR 10-32 x .500 PN HD PHIL       |
| 33              | 281-0014-28     | 4                           | SCR 8-32 x 1.75 OVH PHIL          |
| 34              | 281-0042-12     | 2                           | SCR 6-20 x .750 PN HD PHIL        |
| 35              | 281-0042-32     | 4                           | SCR 6-20 x 2.00 PN HD PHIL        |
| 36              | 281-0045-12     | 6                           | SCR 10-16 x .750 PN HD PHIL       |
| 37              | 281-0134-12     | 4                           | SCR 8-18 x .750 PN HD PHIL, Black |
| 38              |                 |                             |                                   |
| 39              | 282-0005-20     | 14                          | Bolt, 10-24 x 1.25 CRG HD, Blk    |
| 40              | 282-0017-16     | 2                           | Bolt, 1/4-20 x 1.00 HEX HD        |
| 41              | 282-0017-24     | 6                           | Bolt, 1/4-20 x 1.50 HEX HD        |
| 42              |                 |                             |                                   |
| 43              | 283-0060-18     | 6                           | Washer #6 Flat, STL               |
| 44              | 283-0060-22     | 6                           | Washer #8 Flat, STL               |
| 45              | 283-0060-24     | 14                          | Washer #10 Flat, STL              |
| 46              | 283-0060-34     | 6                           | Washer #1/4 Flat, STL             |
| 47              | 282-0061-05     | 5                           | Washer #8 Lock, Split, STL        |
| 48              | 283-0061-06     | 21                          | Washer #10 Lock, Split, STL       |
| 49              | 283-0061-08     | 6                           | Washer #1/4 Lock, Split, STL      |
| 50              |                 |                             |                                   |
| 51              | 283-0071-14     | 1                           | Nut 10-24 Wing, STL               |
| 52              | 283-0072-13     | 5                           | Nut 8-32 HEX                      |
| 53              | 283-0072-15     | 14                          | Nut 10-24 HEX                     |
| 54              |                 |                             |                                   |
| 55              | 320-0020-00     | 2'                          | Sealant Foam                      |
| 56              | 320-0051-00     | 1'                          | Tie Ribbon                        |
| 57              |                 |                             |                                   |
| 58              | 390-0019-00     | 1                           | Lamp Fluorescent                  |
| 59              |                 |                             |                                   |

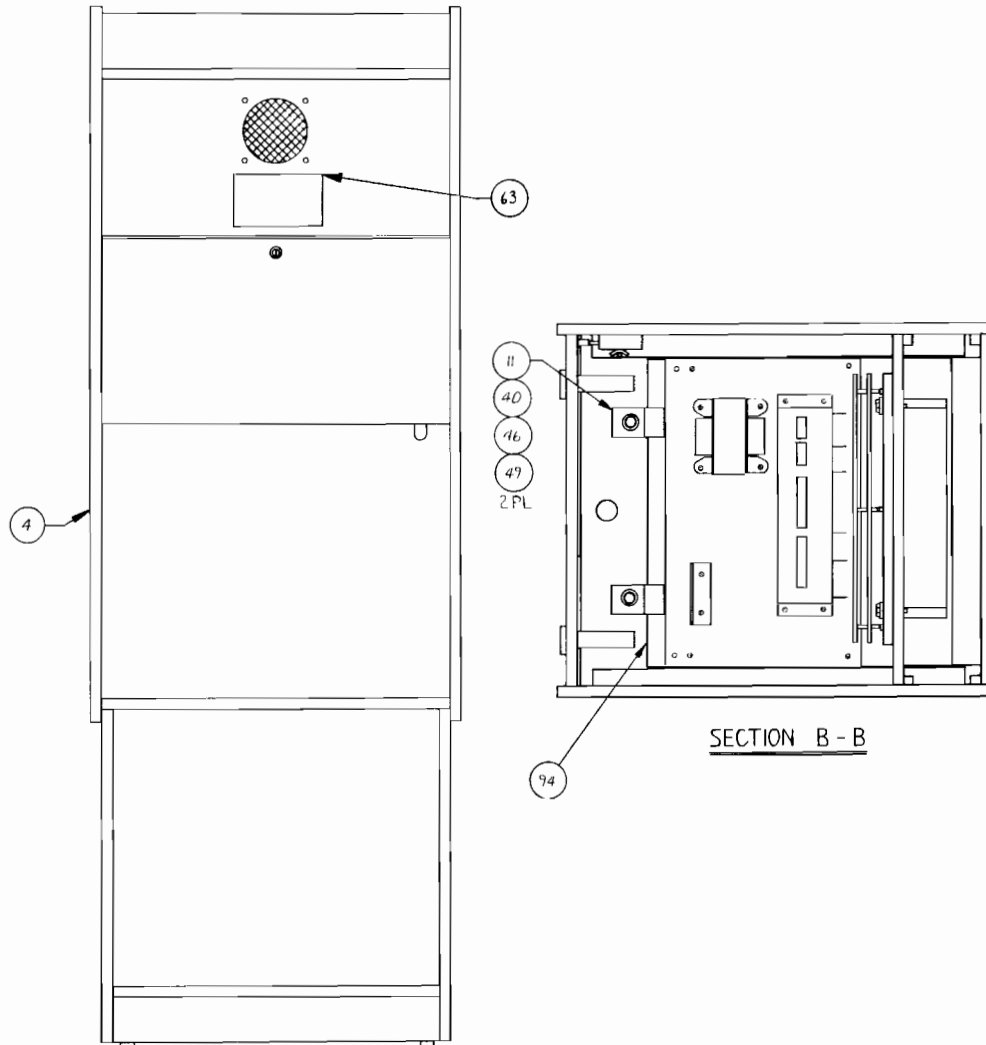
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>         |
|-----------------|-----------------|-----------------------------|----------------------------|
| 60              | 420-0030-00     | 1                           | Decal Caution 115V         |
| 61              | 420-0624-00     | 1                           | Light Baffle               |
| 62              | 420-0793-00     | 1                           | Decal Toll Free No.        |
| 63              | 420-0912-00     | 1                           | Decal FCC                  |
| 64              | 420-0914-07     | 1                           | Decal Original Game Seal   |
| 65              |                 |                             |                            |
| 66              | 420-0977-00     | 1                           | Graphic Interior           |
| 67              | 420-0978-00     | 1                           | Decal, Box                 |
| 68              | 420-0979-00     | 1                           | Manual                     |
| 69              | 420-0982-00     | 1                           | Decal Dip SW Settings      |
| 70              | 420-1016-00     | 1                           | Graphic Side Left          |
| 71              | 420-1017-00     | 1                           | Graphic Side Right         |
| 72              | 420-1006-00     | 1                           | New Game Card              |
| 73              | 420-1007-00     | 1                           | Decal, Game Instructions   |
| 74              |                 |                             |                            |
| 75              |                 |                             |                            |
| 76              |                 |                             |                            |
| 77              |                 |                             |                            |
| 78              | 800-0145-00     | 1                           | Assy AC Junction Box       |
| 79              | 800-0147-01     | 1                           | Fluorescent Lamp Assy 2 UL |
| 80              | 800-0232-00     | 1                           | Assy Harn. GND             |
| 81              | 800-0322-00     | 1                           | Assy Cord Fan              |
| 82              | 800-0329-00     | 1                           | Assy Harn. Monitor AC      |
| 83              | 800-0330-00     | 1                           | Assy Harn. GND Monitor     |
| 84              | 800-0362-00     | 1                           | Assy Monitor CLR Vertical  |
| 85              | 800-0370-00     | 1                           | GND Strap                  |
| 86              | 800-0371-00     | 1                           | Assy Speaker Harn.         |
| 87              | 800-0372-00     | 1                           | Harn. Coin Mech            |
| 88              |                 |                             |                            |
| 89              |                 |                             |                            |

TOP ASSEMBLY

DRAWING NUMBER 700-0139

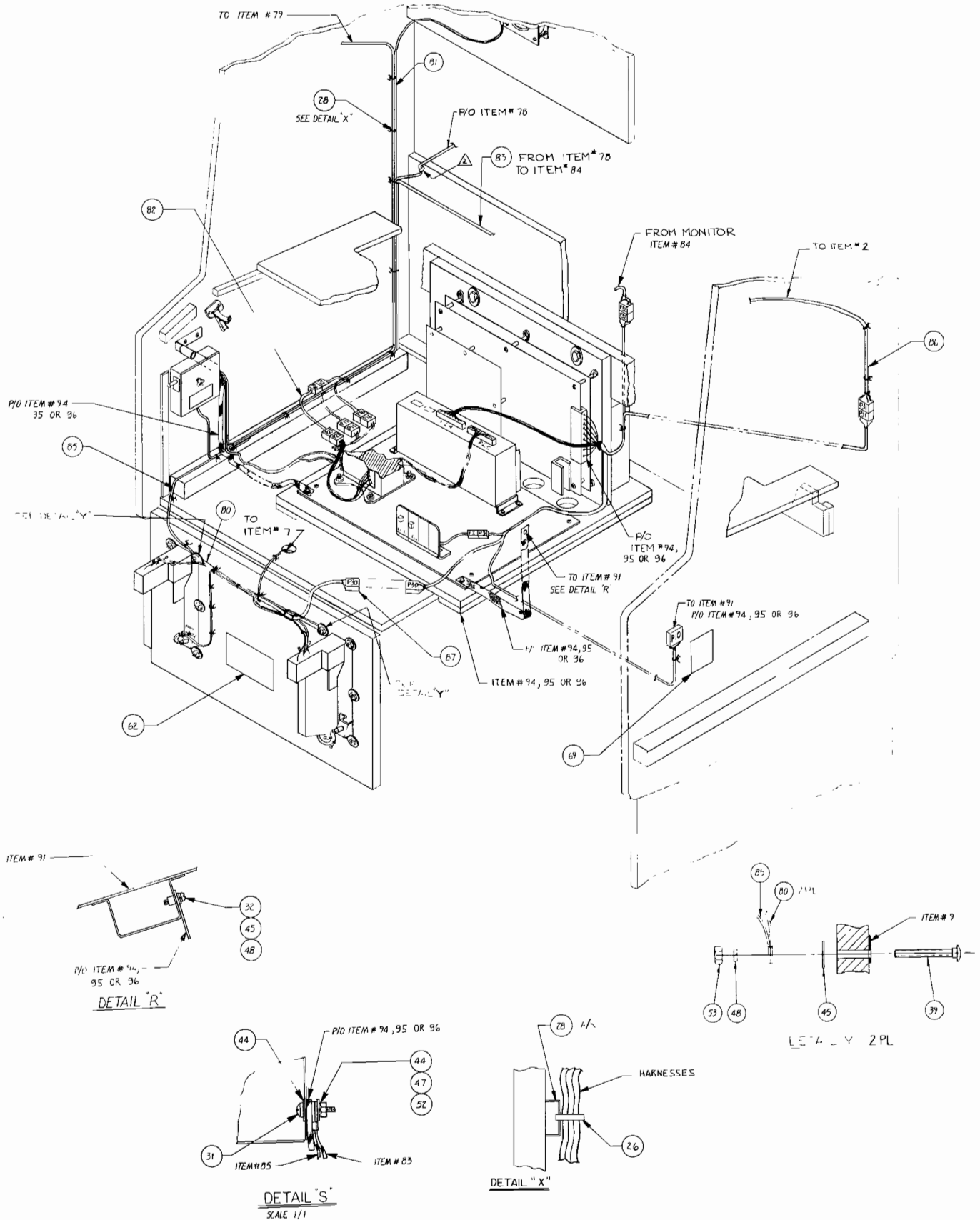
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>    |
|-----------------|-----------------|-----------------------------|-----------------------|
| 90              |                 |                             |                       |
| 91              | 800-3396-00     | 1                           | Control Panel Assy    |
| 92              |                 |                             |                       |
| 93              |                 |                             |                       |
| 94              | 800-3401-02     | 1                           | Assy, Component Shelf |
| 95              |                 |                             |                       |
| 96              |                 |                             |                       |
|                 | 420-0780-00     | REF                         | Game Shipping Kit     |





# Top Assembly

700-0139



## COMPONENT SHELF ASSEMBLY

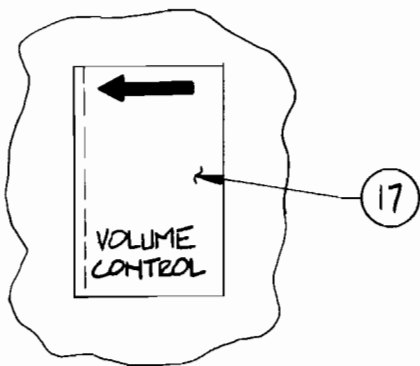
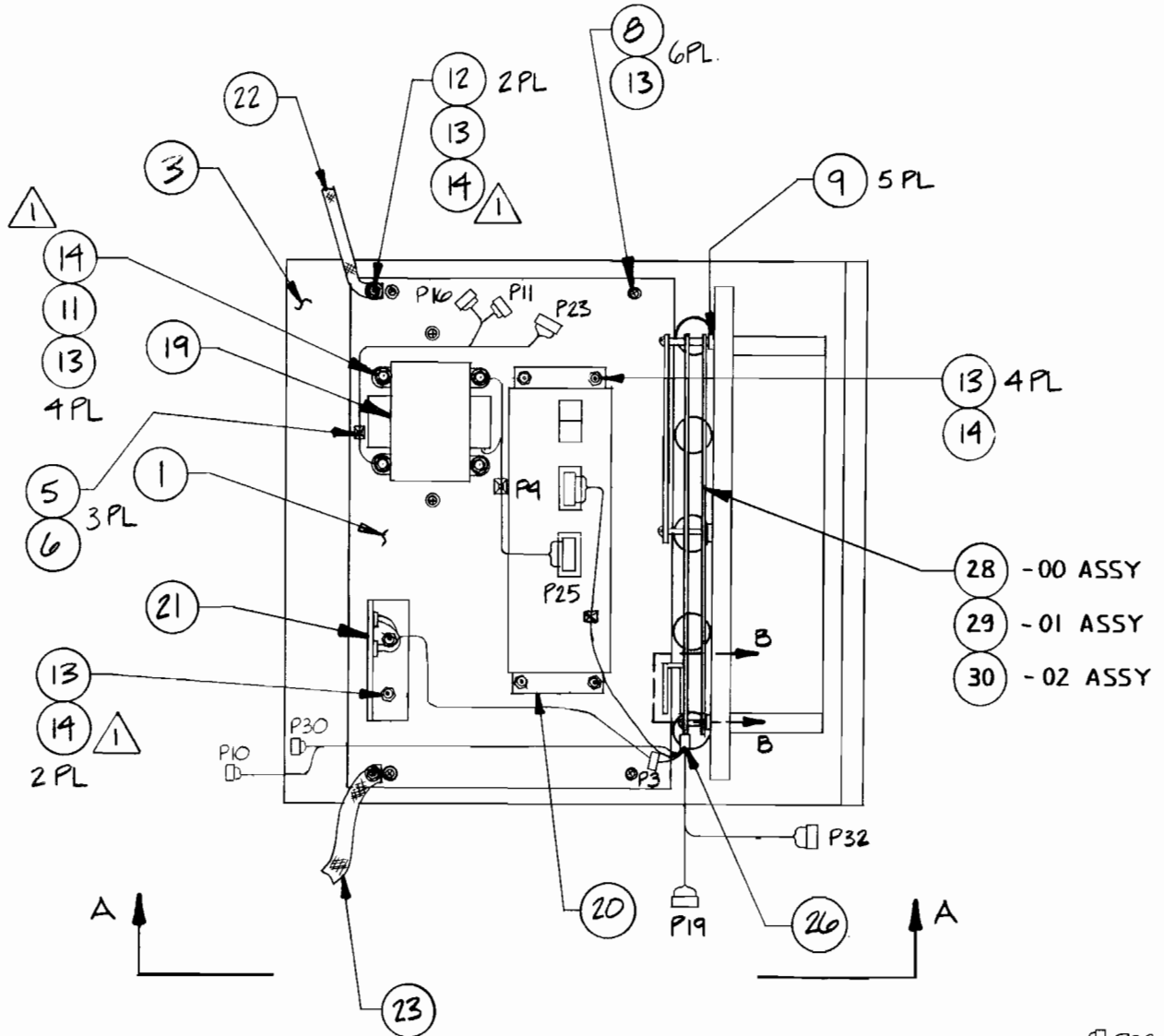
DRAWING NUMBER 800-3401

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> |     |     | <u>DESCRIPTION</u>              |
|-----------------|-----------------|------------------|-----|-----|---------------------------------|
|                 |                 | -00              | -01 | -02 |                                 |
| 1               | 250-0654-00     | 1                | 1   | 1   | Ground Plane                    |
| 2               |                 |                  |     |     |                                 |
| 3               | 252-0274-00     | 1                | 1   | 1   | Component Shelf                 |
| 4               |                 |                  |     |     |                                 |
| 5               | 280-0005-00     | 3                | 3   | 3   | Cable Tie                       |
| 6               | 280-0327-00     | 3                | 3   | 3   | Base Tie Wrap                   |
| 7               |                 |                  |     |     |                                 |
| 8               | 281-0045-12     | 6                | 6   | 6   | Screw, 10-16 X .750 PN HD PHIL  |
| 9               | 281-0052-12     | 5                | 5   | 5   | Screw, 6-20 X .750 FL HD PHIL   |
| 10              |                 |                  |     |     |                                 |
| 11              | 283-0060-24     | 4                | 4   | 4   | Washer, #10 Flat                |
| 12              | 283-0060-27     | 2                | 2   | 2   | Washer, #10 Flat, Large O.D.    |
| 13              | 283-0061-06     | 18               | 18  | 18  | Washer, #10 Lock                |
| 14              | 283-0072-16     | 12               | 12  | 12  | Nut, #10-32 Hex                 |
| 15              |                 |                  |     |     |                                 |
| 16              |                 |                  |     |     |                                 |
| 17              | 420-1008-00     | 1                | 1   | 1   | Volume Control Decal            |
| 18              |                 |                  |     |     |                                 |
| 19              | 800-0190-00     | 1                | 1   | 1   | EMI Xformer Assembly            |
| 20              | 800-0191-04     | 1                | 1   | 1   | G-80 Power Supply Assembly      |
| 21              | 800-0364-01     | 1                | 1   | 1   | Operator Control Block Assembly |
| 22              | 800-0423-07     | 1                | 1   | 1   | Ground Strap Assembly           |
| 23              | 800-0423-08     | 1                | 1   | 1   | Ground Strap Assembly           |
| 24              |                 |                  |     |     |                                 |
| 25              |                 |                  |     |     |                                 |
| 26              | 800-3402-00     | 1                | 1   | 1   | Master Harness Assembly         |
| 27              |                 |                  |     |     |                                 |
| 28              | 834-5197-00     | 1                | -   | -   | IC Board Assembly               |
| 29              | 834-5165-00     | -                | 1   | -   | IC Board Assembly               |
| 30              | 834-5180-00     | -                | -   | 1   | IC Board Assembly               |

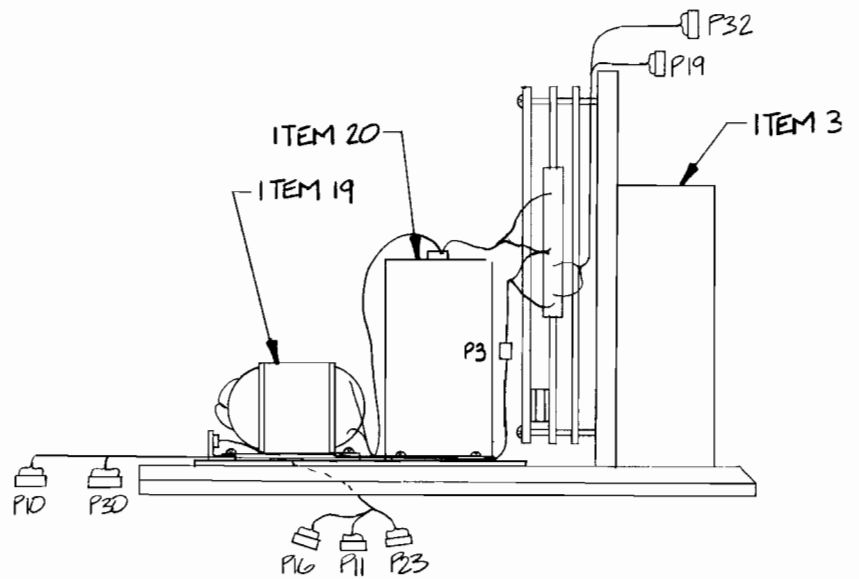


# Component Shelf Assembly

800-3401



VIEW B-B

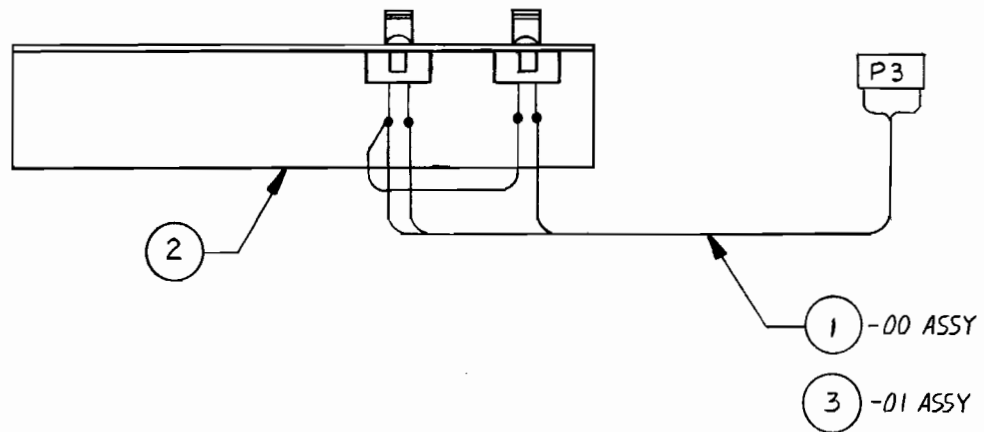
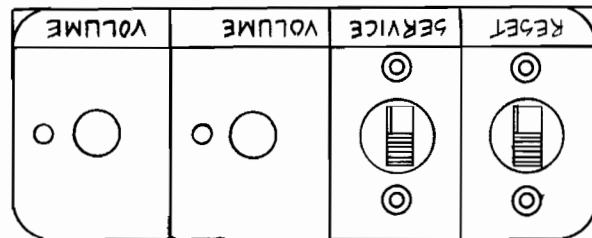


VIEW A-A

OPERATOR CONTROL BLOCK ASSEMBLY "Z"

DRAWING NUMBER 800-0364

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> |     | <u>DESCRIPTION</u>               |
|-----------------|-----------------|------------------|-----|----------------------------------|
|                 |                 | -00              | -01 |                                  |
| 1               | 800-0387-00     | 1                | -   | Operator Cont. Blk. Harness Assy |
| 2               | 800-0388-00     | 1                | 1   | Operator Control Block           |
| 3               | 800-0484-00     | -                | 1   | Operator Cont. Blk. Harness Assy |



## **Common Assemblies**

AC JUNCTION BOX ASSEMBLY

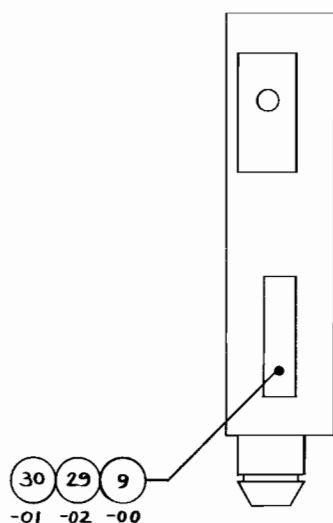
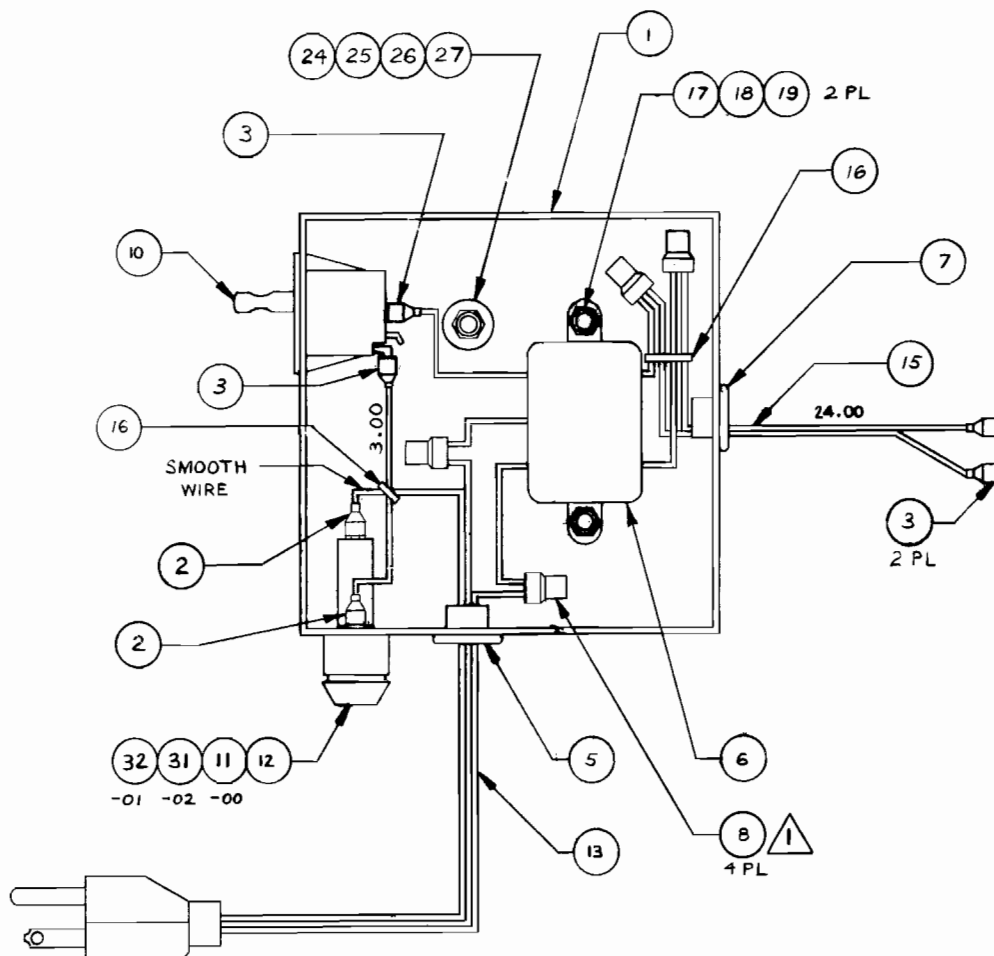
DRAWING NUMBER 800-0145

| ITEM NO. | PART NO.    | QTY REQD. |     |     |      | DESCRIPTION                         | REF DES.                   |
|----------|-------------|-----------|-----|-----|------|-------------------------------------|----------------------------|
|          |             | -00       | -01 | -02 | -03  |                                     |                            |
| 1        | 140-0020-00 | 1         | 1   | 1   | 1    | Junction Box Metal                  |                            |
| 2        | 211-0165-00 | 2         | 2   | 2   | 2    | Conn Quick Fem<br>Fully INSL.       | .250 x .032<br>(AWG 18-22) |
| 3        | 211-0164-00 | 4         | 4   | 4   | 4    | Conn Quick Fem<br>Fully INSL.       | .187 x .020<br>(AWG 18-22) |
| 4        |             |           |     |     |      |                                     |                            |
| 5        | 280-0361-00 | 1         | 1   | 1   | 1    | Bushing S/REL AC<br>Cord            |                            |
| 6        | 270-0001-00 | 1         | 1   | 1   | 1    | Filter EMI                          |                            |
| 7        | 280-0007-00 | 1         | 1   | 1   | 1    | Bushing S/REL 1/2                   |                            |
| 8        | 280-0362-00 | 4         | 4   | 4   | 4    | Electric Crimp<br>Sleeve AWG 24-18  |                            |
| 9        | 420-0598-00 | 1         | -   | -   | -    | Decal 2 AMP Fuse                    |                            |
| 10       | 510-0013-00 | 1         | 1   | 1   | 1    | Switch Spot Cherry                  |                            |
| 11       | 514-0001-00 | 1         | -   | -   | -    | Fuse 2 AMP 250V<br>S.B.             |                            |
| 12       | 514-0005-00 | 1         | 1   | 1   | 1    | Holder Fuse                         |                            |
| 13       | 600-0001-00 | 1         | 1   | 1   | 1    | Cord Line 3 Cond.                   |                            |
| 14       |             |           |     |     |      |                                     |                            |
| 15       | 600-0079-00 | 2FT       | 2FT | 2FT | 3.25 | Cord Line Zip                       |                            |
| 16       | 280-0005-00 | 2         | 2   | 2   | 2    | Cable Tie                           |                            |
| 17       | 281-0002-10 | 2         | 2   | 2   | 2    | SCK PN HD PHIL<br>#6-32 x .625 Mach |                            |
| 18       | 283-0072-11 | 2         | 2   | 2   | 2    | Nut HEX HD #6-32<br>Mach            |                            |
| 19       | 283-0062-04 | 2         | 2   | 2   | 2    | Washer Lock INT.<br>Tooth #6        |                            |
| 20       |             |           |     |     |      |                                     |                            |
| 21       |             |           |     |     |      |                                     |                            |
| 22       |             |           |     |     |      |                                     |                            |
| 23       |             |           |     |     |      |                                     |                            |

AC JUNCTION BOX ASSEMBLY

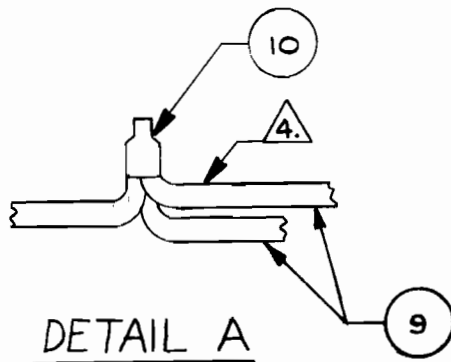
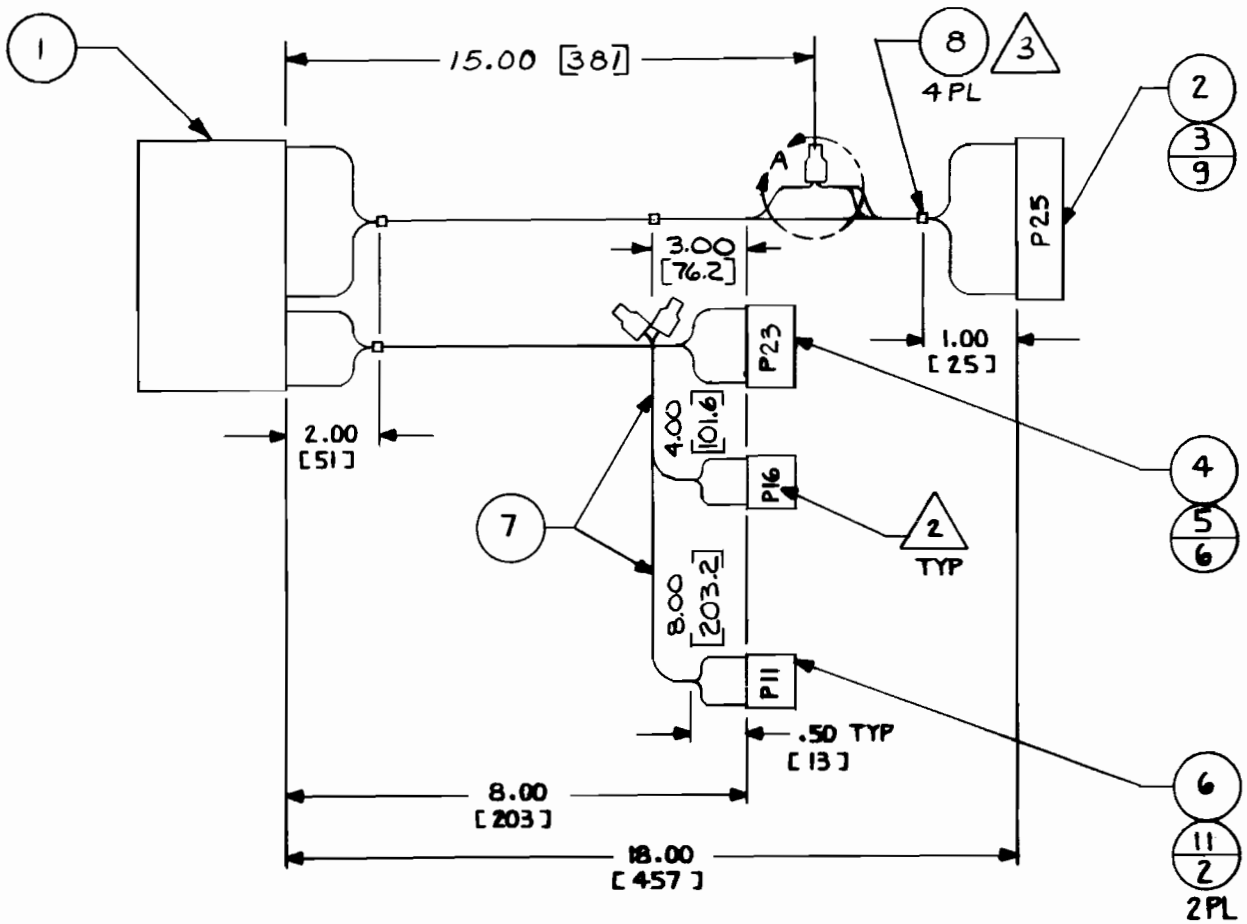
DRAWING NUMBER 800-0145

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY. REQD.</u> |     |     |     | <u>DESCRIPTION</u>                    | <u>REF DES.</u> |
|-----------------|-----------------|-------------------|-----|-----|-----|---------------------------------------|-----------------|
|                 |                 | -00               | -01 | -02 | -03 |                                       |                 |
| 24              | 283-0060-32     | 1                 | 1   | 1   | 1   | Washer Flat Reg.<br>O.D. #1/4         |                 |
| 25              | 283-0072-15     | 1                 | 1   | 1   | 1   | Nut HEX HD #10-24<br>Mach             |                 |
| 26              | 282-0005-28     | 1                 | 1   | 1   | 1   | Bolt Carriage #10-<br>24 x 1.750 Mach |                 |
| 27              | 310-0016-16     | 1                 | 1   | 1   | 1   | Insul. TBG .187 ID                    |                 |
| 28              |                 |                   |     |     |     |                                       |                 |
| 29              | 420-0597-00     | -                 | -   | 1   | -   | Decal 1 AMP Fuse                      |                 |
| 30              | 420-0634-00     | -                 | 1   | -   | 1   | Decal 5 AMP Fuse                      |                 |
| 31              | 514-0051-00     | -                 | -   | 1   | -   | Fuse 1 AMP 250V                       |                 |
| 32              | 514-0053-00     | -                 | 1   | -   | 1   | Fuse 5 AMP S.B.                       |                 |
| 33              | 211-0044-00     | -                 | -   | -   | 1   | Conn Cap AMP 2 Pin                    |                 |
| 34              | 211-0041-00     | -                 | -   | -   | 2   | Conn Pin AMP                          |                 |
| 35              | 211-0027-01     | -                 | -   | -   | 2   | Conn Ring Lug #6<br>Insulated         |                 |



| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u>  |       | <u>DESCRIPTION</u>          |
|-----------------|-----------------|--------------|-------|-----------------------------|
|                 |                 | <u>REQD.</u> |       |                             |
| 1               | 560-0055-00     | 1            | 1     | Transformer G-80 PWR Supply |
| 2               | 212-0016-00     | 1            | 1     | Conn. FEM 10 Pin            |
| 3               | 211-0005-00     | 10           | 10    | Conn. Crimp                 |
| 4               | 211-0045-00     | 1            | 1     | Conn. Plug AMP 6 Pin        |
| 5               | 211-0042-00     | 6            | 6     | Conn. Socket                |
| 6               | 211-0043-00     | 2            | 2     | Conn. Plug AMP 2 Pin        |
| 7               | 600-0079-00     | 1.00'        | 1.25' | Zip Cord                    |
| 8               | 280-0005-00     | 4            | 4     | Cable Tie                   |
| 9               | 600-0092-70     | .5'          | .5'   | Wire 18 AWG BLK             |
| 10              | 280-0359-00     | 3            | 3     | Electric Crimp Sleeve       |
| 11              | 211-0077-00     | 4            | 4     | Conn. Term Socket 20-14 AWG |

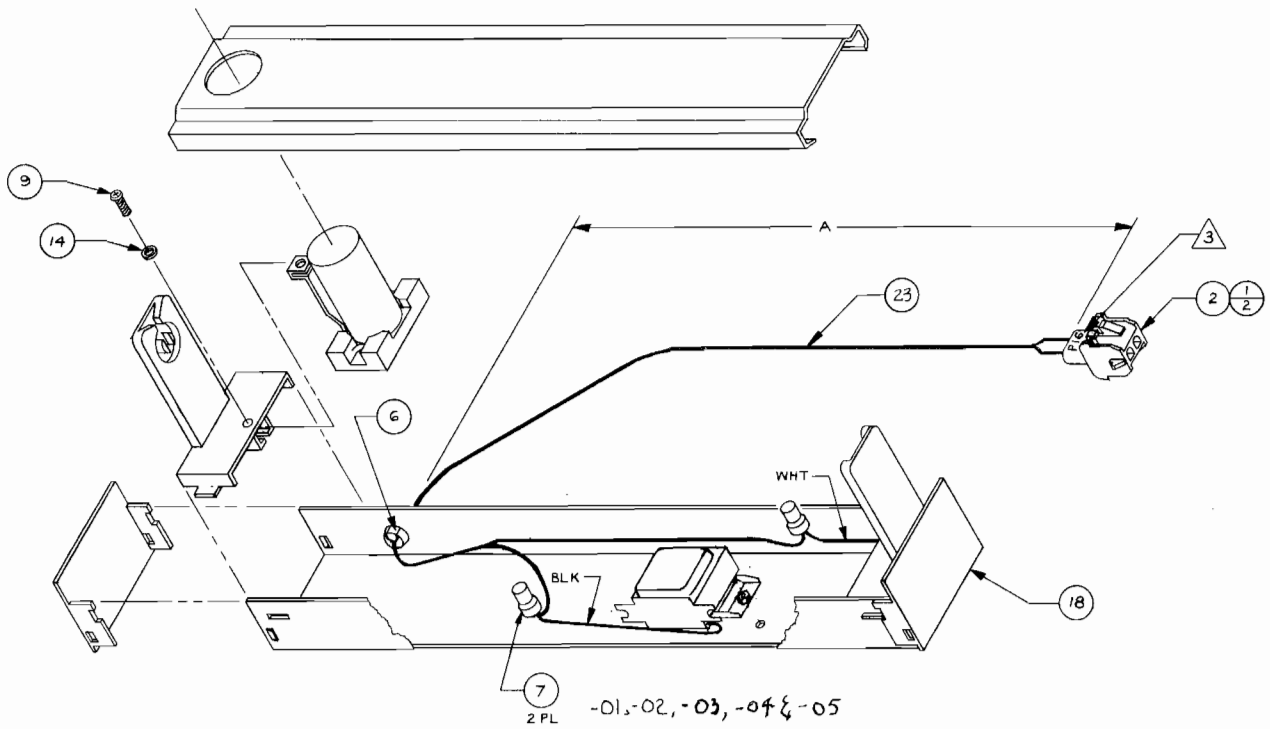




FLUORESCENT LAMP ASSEMBLY

DRAWING NUMBER 800-0147

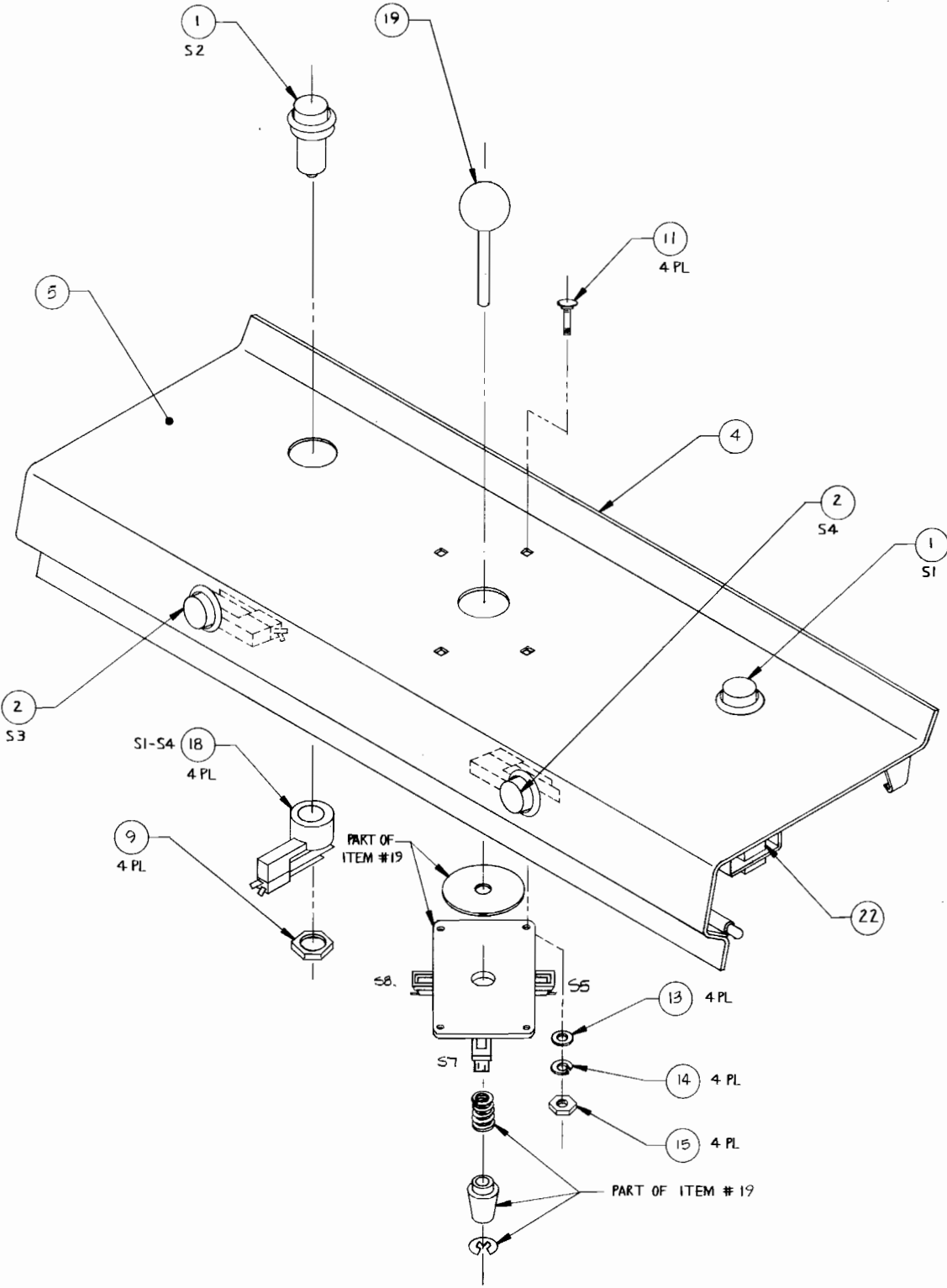
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY. REQD.</u> |      |      |      | <u>DESCRIPTION</u> |                                 |
|-----------------|-----------------|-------------------|------|------|------|--------------------|---------------------------------|
| 1               | 211-0041-00     | 2                 | 2    | 2    | 2    | 2                  | Conn Pin AMP                    |
| 2               | 211-0044-00     | 1                 | 1    | 1    | 1    | 1                  | Conn Cap AMP 2 Pin              |
| 3               |                 |                   |      |      |      |                    |                                 |
| 4               | 211-0166-00     | 1                 | -    | -    | -    | -                  | Conn Crimp Ring #10             |
| 5               |                 |                   |      |      |      |                    |                                 |
| 6               | 280-0361-00     | -                 | 1    | 1    | 1    | 1                  | BSHG STR RLF AC Cord            |
| 7               | 280-0362-00     | -                 | 2    | 2    | 2    | 2                  | Elec. CRP SL 24-18 AWG          |
| 8               |                 |                   |      |      |      |                    |                                 |
| 9               | 281-0002-06     | 1                 | 1    | 1    | 1    | 1                  | SCR #6-32 x .375 Pan HD<br>PHIL |
| 10              |                 |                   |      |      |      |                    |                                 |
| 11              |                 |                   |      |      |      |                    |                                 |
| 12              |                 |                   |      |      |      |                    |                                 |
| 13              |                 |                   |      |      |      |                    |                                 |
| 14              | 283-0060-19     | -                 | 1    | 1    | 1    | 1                  | Washer #6 Flat, Steel           |
| 15              |                 |                   |      |      |      |                    |                                 |
| 16              |                 |                   |      |      |      |                    |                                 |
| 17              | 390-0083-00     | 1                 | -    | -    | -    | -                  | Fluor. Lamp FXT 18 IN.          |
| 18              | 390-0117-00     | -                 | 1    | 1    | 1    | 1                  | Fluor. Lamp FXT 18 IN.<br>U.L.  |
| 19              |                 |                   |      |      |      |                    |                                 |
| 20              |                 |                   |      |      |      |                    |                                 |
| 21              |                 |                   |      |      |      |                    |                                 |
| 22              |                 |                   |      |      |      |                    |                                 |
| 23              | 600-0079-00     | -                 | 5.9' | 7.6' | 4.0' | 4.4'               | CA 2 Cond. Zip Cord             |

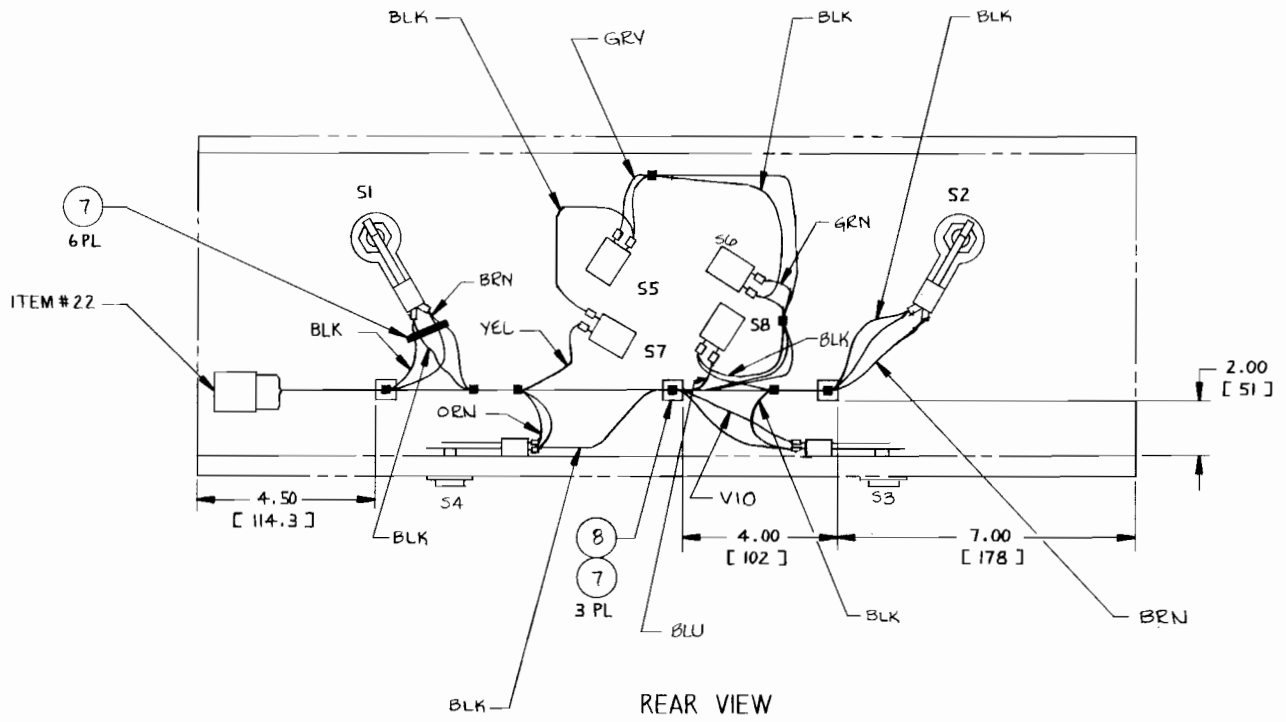


## CONTROL PANEL ASSEMBLY

DRAWING NUMBER 800-3396

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY.</u><br><u>REQD.</u> | <u>DESCRIPTION</u>                     | <u>REF DES.</u> |
|-----------------|-----------------|-----------------------------|--|-----------------|
| 1               | 240-0006-00     | 2                           | Button Plunger, Red                    |                 |
| 2               | 240-0009-00     | 2                           | Button Plunger, Yellow                 |                 |
| 3               |                 |                             |  |                 |
| 4               | 250-0648-00     | 1                           | Control Panel                          |                 |
| 5               | 253-0329-00     | 1                           | Graphic Control Panel                  |                 |
| 6               |                 |                             |  |                 |
| 7               | 280-0005-00     | 9                           | Cable Tie                              |                 |
| 8               | 280-0327-00     | 3                           | Base Tie Wrap                          |                 |
| 9               | 280-0329-00     | 4                           | Nut, 1/2 IN. -13 HEX PAL               |                 |
| 10              |                 |                             |  |                 |
| 11              | 282-0005-12     | 4                           | Bolt #10-24 x .750 LG CRG<br>HD, Black |                 |
| 12              |                 |                             |  |                 |
| 13              | 283-0060-25     | 4                           | Washer #10 Flat Steel                  |                 |
| 14              | 283-0061-06     | 4                           | Washer #10 Lock Split, Steel           |                 |
| 15              | 283-0072-15     | 4                           | Nut #10-24 HEX Mach THD                |                 |
| 16              |                 |                             |  |                 |
| 17              |                 |                             |  |                 |
| 18              | 510-0064-00     | 4                           | Switch Pushbutton MTL PNL              | S1-S4           |
| 19              | 510-0075-00     | 1                           | Joystick, 8-Way                        | S5-S8           |
| 20              |                 |                             |  |                 |
| 21              |                 |                             |  |                 |
| 22              | 800-3398-00     | 1                           | Control Panel Harn. Assy.              |                 |





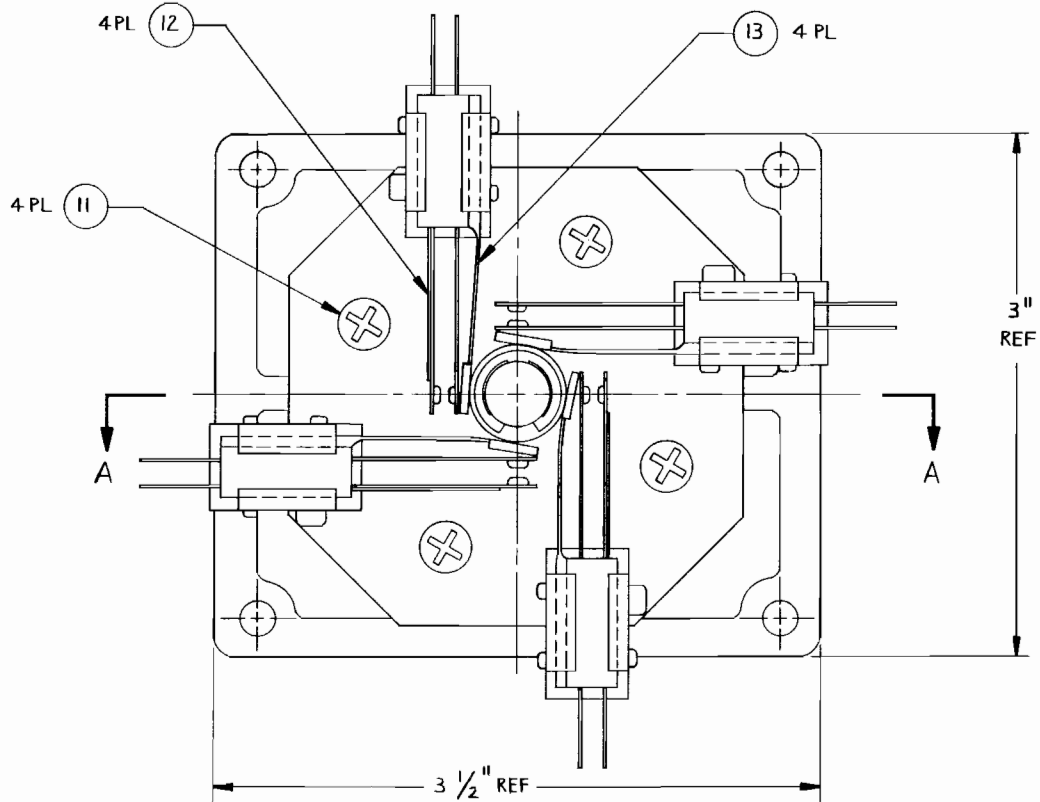
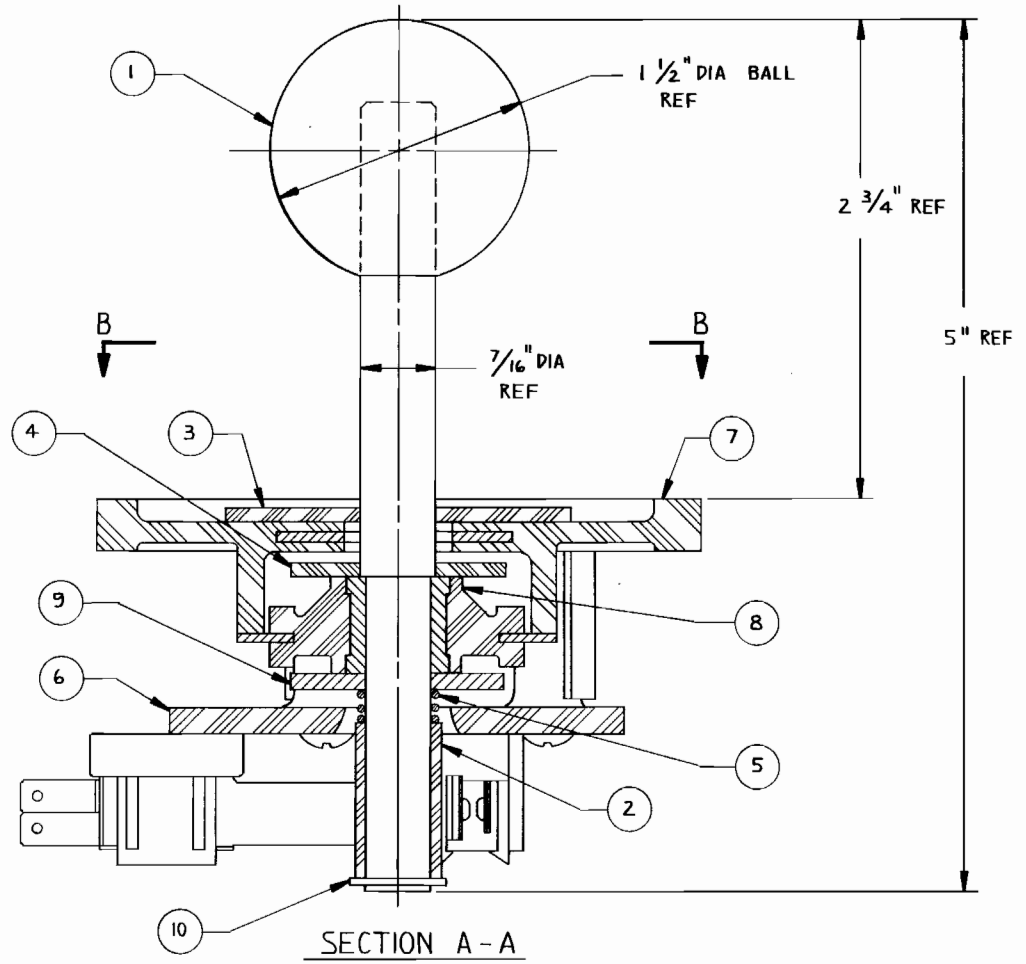
## 8-WAY JOYSTICK ASSEMBLY

DRAWING NUMBER 510-0075

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>       |
|-----------------|-----------------|------------------|--------------------------|
| 1               | 510-0075-01     | 1                | Ball, Handle, Shaft      |
| 2               | 510-0075-02     | 1                | Actuator Switch          |
| 3               | 510-0075-03     | 1                | 2" Washer                |
| 4               | 510-0075-04     | 1                | Bottom Washer            |
| 5               | 510-0075-05     | 1                | Compression Spring       |
| 6               | 510-0075-06     | 1                | Switch Mounting Plate    |
| 7               | 510-0075-07     | 1                | Top Plate w/ insert      |
| 8               | 510-0075-08     | 1                | Diaphragm                |
| 9               | 510-0075-09     | 1                | Flat Washer              |
| 10              | 510-0075-10     | 1                | 3/8 E-ring               |
| 11              | 510-0075-11     | 4                | Screw, 6X1 PHIL R.H.     |
| 12              | 510-0075-12     | 4                | 2/2 Molded Switch        |
| 13              | 510-0075-13     | 4                | Plastic Guard - Actuator |

# 8-Way Joystick Assembly

510-0075

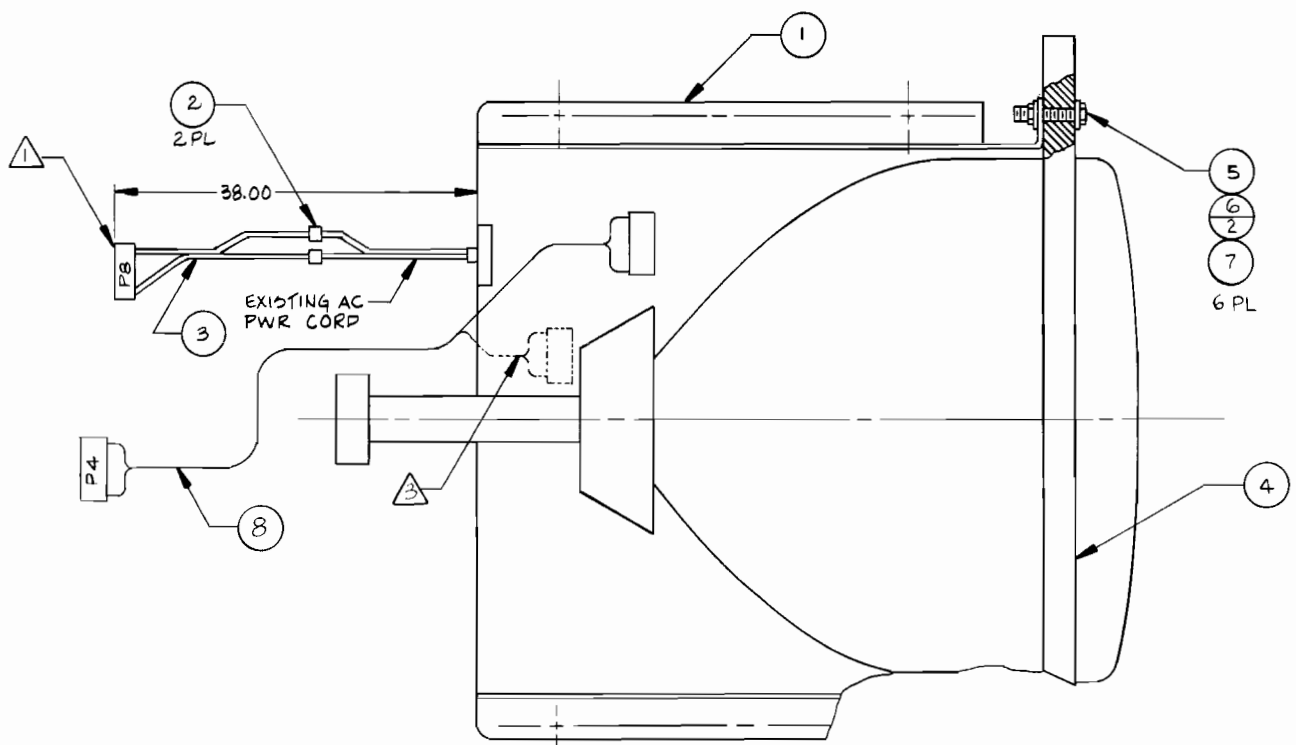




COLOR MONITOR ASSEMBLY

DRAWING NUMBER 800-0362

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY. REQD.</u> |     |     | <u>DESCRIPTION</u>            | <u>REF DES.</u> |
|-----------------|-----------------|-------------------|-----|-----|-------------------------------|-----------------|
|                 |                 | -00               | -01 | -02 |                               |                 |
| 1               | See Below       |                   |     |     |                               |                 |
| 2               | 800-0369-01     | -                 | -   | 1   | Assy. Harness AC "Z"          |                 |
| 3               | 800-0369-00     | 1                 | 1   | -   | Assy. Harness AC "Z"          |                 |
| 4               | 252-0175-00     | 1                 | 1   | 1   | Monitor Mounting Board        |                 |
| 5               | 282-0017-24     | 6                 | 6   | 6   | HEX HD Bolt 1/4-20 x 1.500 LG |                 |
| 6               | 283-0060-34     | 12                | 12  | 12  | Washer, 1/4 Flat              |                 |
| 7               | 283-0070-05     | 6                 | 6   | 6   | Nut-1/4 HEX Self-Locking      |                 |
| 8               | 800-0361-00     | 1                 | 1   | 1   | Assy. Harn. Video INTF        |                 |
| 9               | 470-0221-00     | 3                 | 3   | 3   | RES 220 OHM 1/4 W             | See SH 2        |
| 10              | 470-0302-00     | 3                 | 3   | 3   | RES 3K 1/4 W                  | See SH 2        |
| 11              | 200-0019-00     | -                 | 1   | -   | CRT CL 19 IN. VT MT           |                 |
|                 | 200-0022-00     | -                 | 1   | -   | W/G CLR 19 IN. VT MT          |                 |
| 1               | 200-0019-00     | 1                 | -   | -   | CRT CL 19 IN. VT MT           |                 |
|                 | 200-0091-00     | -                 | -   | 1   | MON 19 IN. Vert. MT W/G       |                 |
| 12              | 280-0005-00     | -                 | -   | 1   | Cable Tie                     |                 |
| 13              | 280-0327-00     | -                 | -   | 1   | Base Tie Wrap                 |                 |



## OUTSIDE OF THE PCB ASSY

| <u>Part No.</u>    | <u>Description</u>              | <u>Ref. Des.</u> |
|--------------------|---------------------------------|------------------|
| 200-0667           | Picture tube 19"                |                  |
| 200-0068           | Deflection yoke                 |                  |
| 113-0009           | PC magnet                       |                  |
| 560-0096           | Flyback trans.                  |                  |
|                    | HVR                             |                  |
|                    | UNF resistor 220 Ohm, 25W K     | R05              |
|                    | C capacitor 150 pf, AC1.5KV     | C04              |
| 482-0198           | Si. transistor, 2SD870          | X01              |
| 482-0143           | Si. transistor, 2SC1106A        | X02              |
|                    | Screw #8 3/8                    |                  |
|                    | Screw 1/4 x 3/4 pix tub mtg (4) |                  |
|                    | Pyramidal lock washer (4)       |                  |
|                    | Nut retainer, pix tube mtg (4)  |                  |
|                    | Clip - PCB support              |                  |
|                    | Standoff                        |                  |
|                    | Wire terminal (gnd strap)       |                  |
|                    | Terminal lug (gnd)              |                  |
|                    | Groundstrap assy                |                  |
|                    | Grounding spring                |                  |
|                    | Wire hook (gnd strap)           |                  |
|                    | Purity shield holddown clamp    |                  |
|                    | Support brkt RH                 |                  |
|                    | Support brkt LH                 |                  |
|                    | Chassis base                    |                  |
|                    | Yoke wedge (3)                  |                  |
| PURITY SHIELD ASSY |                                 |                  |
| 180-0022           | Degaussing coil                 | D911, D912       |
| 481-0225           | Rectifier 1 amp 600 V (2)       |                  |
|                    | Pin Terminal (2)                |                  |

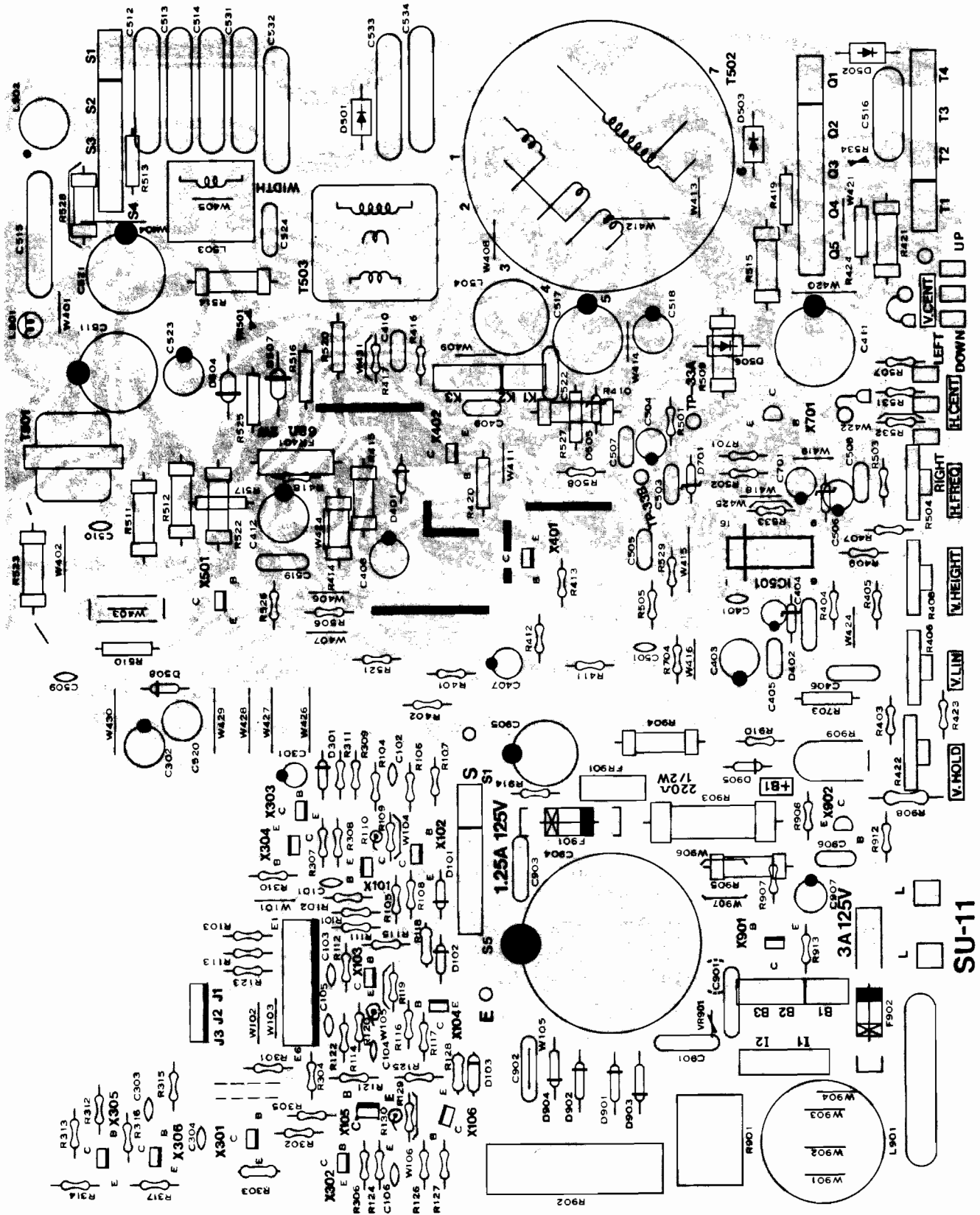
| <u>Part No.</u>     | <u>Description</u>              | <u>Ref. Des.</u> |
|---------------------|---------------------------------|------------------|
|                     | Pin terminal housing            |                  |
|                     | Purity shield (2 pcs)           |                  |
|                     | Purity shield (2 pcs)           |                  |
|                     | Capacitor 100 nf 10% 400V       | C911             |
|                     | Resistor, wirewound 33 Ohm, 4W  | R921             |
|                     | Fire retardant term strip 4 lug |                  |
| CRT SOCKET PCB ASSY |                                 |                  |
|                     | V R 200                         | R105             |
|                     | V R 200                         | R106             |
|                     | V R 5K                          | R113             |
|                     | V R 5K                          | R114             |
|                     | V R 5K                          | R115             |
|                     | OM R 10K Ohm 2W J               | R116             |
|                     | OM R 10K Ohm 2W J               | R117             |
|                     | OM R 10K Ohm 2W J               | R118             |
|                     | Comp R 3.3K Ohm 1/2 K           | R119             |
|                     | Comp R 3.3K Ohm 1/2 K           | R120             |
|                     | Comp R 3.3K Ohm 1/2 K           | R121             |
| Capacitors          | E Cap 10 uf 250V A              | C107             |
|                     | C Cap 1000 pf DC1400V P         | C108             |
| Coils               |                                 |                  |
| 180-0023            | Peaking coil                    | L101             |
| Semiconductors      |                                 |                  |
| 482-0290            | Si transistor, 2SC1514VC        | X101             |
| 482-0290            | Si transistor, 2SC1514VC        | X102             |
| 482-0290            | Si transistor, 2SC1514VC        | X103             |
| Miscellaneous       |                                 |                  |
| 213-0022            | CRT socket                      |                  |

| <u>Part No.</u> | <u>Description</u>        | <u>Ref. Des</u> |
|-----------------|---------------------------|-----------------|
| MAIN PCB ASSY   |                           |                 |
| Resistors       |                           |                 |
|                 | V R 200 Ohm               | R406            |
|                 | V R 200 Ohm               | R408            |
|                 | CMF R 6.8 Ohm 1W J        | R410            |
|                 | OM R 3.3K Ohm 1W J        | R414            |
|                 | OM R 2.7K Ohm 1W J        | R415            |
|                 | OM R 12K Ohm 2W J         | R421            |
|                 | V R 10K Ohm               | R422            |
|                 | F R 68 Ohm 2W K           | FR401           |
|                 | CMF R 11.8K Ohm 1/4W + 1% | R503            |
|                 | V R 5K Ohm                | R504            |
|                 | OM R 10K Ohm 2W J         | R509            |
|                 | OM R 8.2K Ohm 2W J        | R512            |
|                 | OM R 820 Ohm 2W J         | R514            |
|                 | CMF R 8.2 Ohm 1W J        | R515            |
|                 | CMF R 4.7 Ohm 1W J        | R522            |
|                 | OM R 68 Ohm 2W J          | R523            |
|                 | OM R 390 Ohm 1W J         | R528            |
|                 | ZN R 470 Ohm              | R534            |
|                 | ZN R                      | VR501           |
|                 | CMF R 39 Ohm 1/2W + 1%    | R703            |
|                 | CMF R 7.68K Ohm 1/4 + 1%  | R704            |
|                 | Posistor                  | R901            |
|                 | UNF R 2 Ohm 7W K          | R902            |
|                 | CMF R 4.7 Ohm 3W J        | R903            |
|                 | OM R 10K Ohm 2W J         | R904            |
|                 | OM R 18K Ohm 1W J         | R905            |
|                 | CMF R 47 Ohm 1/2W + 1%    | Q908            |
|                 | V R 2K Ohm                | R909            |
|                 | CMF R 2.74K Ohm 1/4 + 1%  | R910            |
|                 | F R 220 Ohm 1/2W K        | FR901           |

| <u>Part No.</u>       | <u>Description</u>        | <u>Ref. Des</u> |
|-----------------------|---------------------------|-----------------|
| <b>Capacitors</b>     |                           |                 |
|                       | BPE Cap 3.3 uf 50V A      | C301            |
|                       | Tan cap 2.2 uf 16V K      | C402            |
|                       | E cap 4.7 uf 6.3V A       | C407            |
|                       | E cap 100 uf 160V A       | C411            |
|                       | E cap 3.3 uf 160V A       | C412            |
|                       | PP cap 5600 uf 50V J      | C508            |
|                       | PP cap 2000 pf DC1500V J  | C512            |
|                       | PP cap 2000 pf DC1500V J  | C513            |
|                       | PP cap 2000 pf DC1500V J  | C514            |
|                       | PP cap 0.53 uf DC1200V J  | C515            |
|                       | BPE cap 3.3 uf 50V A      | C520            |
|                       | E cap 1 uf 160V A         | C523            |
|                       | M cap 0.1 uf 200V K       | C524            |
|                       | PP cap 2000 pf DC1500V J  | C531            |
|                       | PP cap 1500 pf DC1500V J  | C532            |
|                       | E cap                     | C904            |
|                       | E cap 10 uf 250V A        | C905            |
| <b>Coils</b>          |                           |                 |
| 180-0024              | Linarity coil             | L502            |
| 181-0031              | Width coil                | L503            |
| 180-0025              | Heater choke              | L504            |
| <b>Transformers</b>   |                           |                 |
| 560-0061              | Hor drive transf          | T501            |
| 560-0097              | Side pin transf           | T503            |
| <b>Semiconductors</b> |                           |                 |
| 316-0807              | IC HA11244                | IC501           |
| 482-0177              | Si transistor, 2SC1685(R) | X101            |
| 482-0111              | Si transistor, 2SA673(C)  | X102            |
| 482-0177              | Si transistor, 2SC1685(R) | X103            |
| 482-0111              | Si transistor, 2SA673(C)  | X104            |
| 482-0177              | Si transistor, 2SC1685(R) | X105            |

| <u>Part No.</u> | <u>Description</u>           | <u>Ref. Des</u> |
|-----------------|------------------------------|-----------------|
| 482-0111        | Si transistor, 2SCA673(C)    | X106            |
| 482-0177        | Si transistor, 2SC1685(R)    | X301            |
| 482-0177        | Si transistor, 2SC1685(R)    | X302            |
| 482-0111        | Si transistor, 2SA673(C)     | X303            |
| 482-0177        | Si transistor, 2SC1685(R)    | X304            |
| 482-0177        | Si transistor, 2SC1685(R)    | X305            |
| 482-0196        | Si transistor, 2SD478        | X401            |
| 482-0196        | Si transistor, 2SD478        | X402            |
| 482-0291        | Si transistor, 2SC2610BK     | X501            |
| 482-0257        | Si transistor, 2SC2688 (KLM) | X901            |
| 482-0258        | Si transistor, 2SC1890A (EF) | X902            |
| 481-0226        | Si diode, W06A               | D101            |
| 481-0226        | Si diode, W06A               | D102            |
| 481-0226        | Si diode, W06A               | D103            |
| 481-0149        | Si diode, 1SZ473H            | D301            |
| 481-0149        | Si diode, 1SZ473H            | D401            |
| 481-0227        | Zener diode, RD10F(C)        | D402            |
| 481-0171        | Si diode, HF-1               | D503            |
| 481-0228        | Si diode, V09E               | D504            |
| 481-0229        | Zener diode, RD11E(B)        | D505            |
| 581-0226        | Si diode, W06A               | D506            |
| 481-0230        | Si diode, 1SS81              | D507            |
| 481-0149        | Si diode, 1SZ473H            | D508            |
| 481-0231        | Zener diode, RD20EV2         | D701            |
| 481-0160        | Si diode, 1S1887A            | D901            |
| 481-0160        | Si diode, 1S1887A            | D902            |
| 481-0160        | Si diode, 1S1887A            | D903            |
| 481-0160        | Si diode, 1S1887A            | D904            |
| 481-0198        | Zener diode, RD6.8EV3        | D905            |
| Miscellaneous   |                              |                 |
|                 | Fuse 1.25A                   | F901            |
|                 | US fuse 3A                   | F902            |

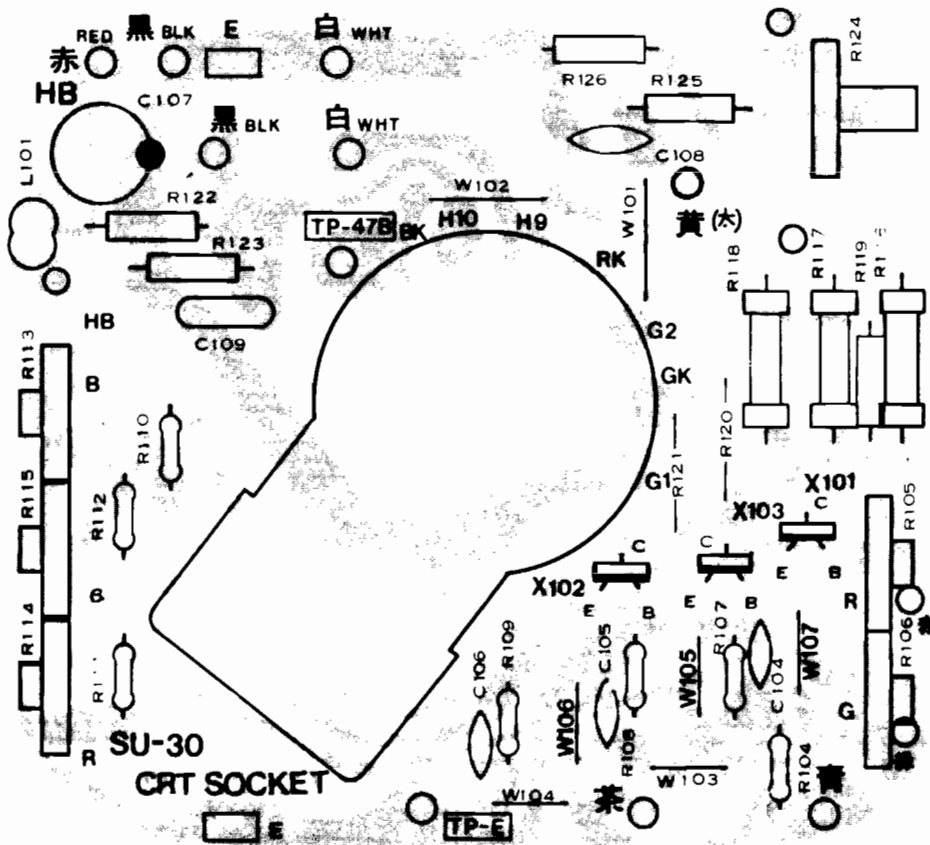
MAIN P.C.B. COMPONENT LAYOUT



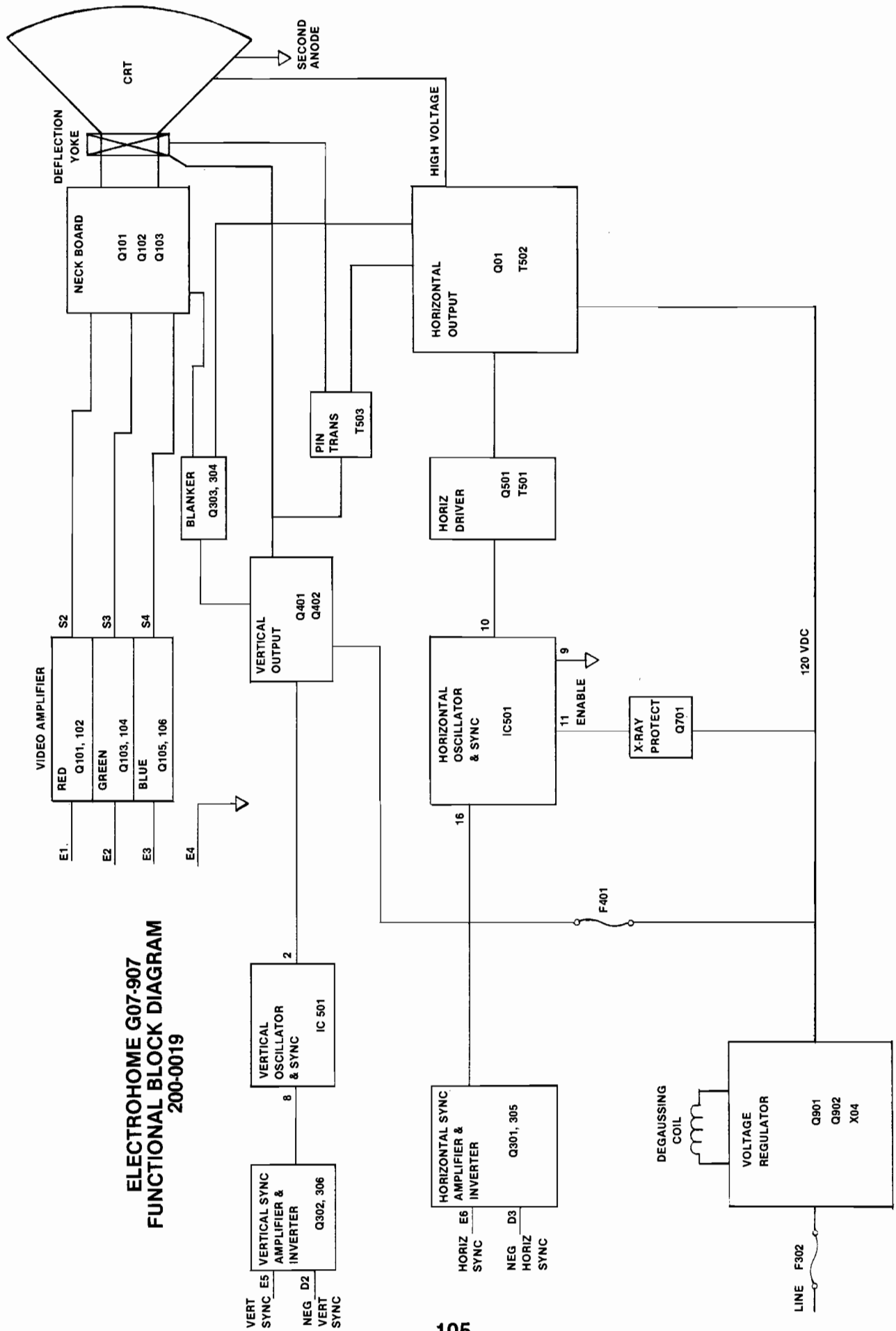
SU-11



C.R.T. P.C.B. COMPONENT LAYOUT



# ELECTROHOME G07-907 FUNCTIONAL BLOCK DIAGRAM 200-0019



| <u>Part No.</u> | <u>Description</u>                  | <u>Ref. Des</u> |
|-----------------|-------------------------------------|-----------------|
| Resistors       | 33k Ohm, <u>+10%</u> , 1/2W carbon  | R603            |
|                 | 470 Ohm, <u>+10%</u> , 5W WW        | R606            |
|                 | 2.7k Ohm, <u>+10%</u> , 5W WW       | R607            |
|                 | 1.2k Ohm, <u>+10%</u> , 1W MO       | R608            |
|                 | 22 Ohm, <u>+5%</u> , 1/8W carbon    | R610            |
|                 | 1k Ohm, <u>+5%</u> , 1/2W carbon    | R611            |
|                 | 470 Ohm, <u>+10%</u> , 1/2W carbon  | R612            |
|                 | 1.2k Ohm, <u>+5%</u> , 1W MO        | R613            |
|                 | 680k Ohm, <u>+5%</u> , 1/2W comp    | R614            |
|                 | 270k Ohm, <u>+5%</u> , 1/2W comp    | R615            |
|                 | 2.7 Ohm, <u>+5%</u> , 1/8W carbon   | R616            |
|                 | 68k Ohm, <u>+5%</u> , 1/8W carbon   | R617            |
|                 | 1k Ohm, <u>+5%</u> , 1/2W carbon    | R624            |
|                 | 2.2 Ohm, <u>+10%</u> , 5W MO        | R631            |
|                 | 120 Ohm, <u>+5%</u> , 5W carbon     | R632            |
|                 | 2.2 Ohm, <u>+5%</u> , 1/8W carbon   | R634            |
|                 | 6.8 Ohm, <u>+5%</u> , 1/2W carbon   | R635            |
|                 | 33k Ohm, <u>+5%</u> , 1/8W carbon   | R641            |
|                 | 15k Ohm, <u>+5%</u> , 1/8W carbon   | R642            |
|                 | 15 Ohm, <u>+10%</u> , 2W carbon     | R647            |
|                 | 1.8k Ohm, <u>+10%</u> , 1/2W carbon | R649            |
|                 | 270k Ohm, <u>+10%</u> , 1/2W carbon | R650            |
|                 | 240 Ohm, <u>+10%</u> , 2W carbon    | R651            |
|                 | 6/8k Ohm, <u>+10%</u> , 1/2W carbon |                 |
| Semiconductors  |                                     |                 |
| 482-0262        | Transistor, 2SC1893                 | TR601           |
| 481-0214        | Rectifier, (SI) RM-2AV 600V         | X601            |
| 481-0214        | Rectifier, (SI) RM-2AV 600V         | X602            |
| 481-0214        | Rectifier, (SI) RM-2AV 600V         | X603            |
| 481-0214        | Rectifier, (SI) RM-2AV 600V         | X604            |
| 481-0215        | Diode (HS) SB-2CGL 1200V min        | X605            |
| 481-0149        | Diode (SI) IS2473-772               | X606            |

| <u>Part No.</u>      | <u>Description</u>                 | <u>Ref. Des</u> |
|----------------------|------------------------------------|-----------------|
| 481-0216             | Diode (HS) RC-2V 0.8 US            | X607            |
| 481-0217             | Diode (HS) RU-2V                   | X608            |
| 481-0217             | Diode (HS) RU-2V                   | X609            |
| 481-0218             | Rectifier, power (SI) 500V PIV     | X610            |
| 481-0218             | Rectifier, power (SI) 500V PIV     | X611            |
| 481-0218             | Rectifier, power (SI) 500V PIV     | X612            |
| Transformers & Coils |                                    |                 |
| 180-0020             | Coil, line filter R-3              | L601            |
| 180-0014             | Coil, filter, 10uh                 | L602            |
| 560-0094             | Transformer, hor drive             | T602            |
| 560-0095             | Transformer, side PC               | T603            |
| 180-0015             | Width coil                         | L702            |
| Capacitors           |                                    |                 |
|                      | 0.1 uf, 125V, <u>+20%</u> MM       | C601            |
|                      | 2200 pf, Z5F, <u>+10%</u> ceramic  | C602            |
|                      | 2200 pf, 125V ceramic              | C603            |
|                      | 2200 pf, Z5F, <u>+10%</u> ceramic  | C604            |
|                      | 330 uf, 200V electrolytic          | C605            |
|                      | 47 uf, 160V electrolytic           | C608            |
|                      | .0033 uf, 500V <u>+10%</u> ceramic | C609            |
|                      | .01 uf, 500V, <u>+10%</u> ceramic  | C610            |
|                      | 100 pf, 3 KV, <u>+10%</u> ceramic  | C611            |
|                      | .022 uf, 200v, <u>+10%</u> PP      | C612            |
|                      | 220 uf, 25V electrolytic           | C613            |
|                      | 33 uf, 25V electrolytic            | C614            |
|                      | 0.39 uf, 200V, <u>+10%</u> PP      | C615            |
|                      | 47 pf, 500V ceramic                | C616            |
|                      | 1 uf, 50v electrolytic             | C617            |
|                      | 1 uf, 50V electrolytic             | C619            |
|                      | 0.1 uf, 100V, <u>+10%</u> mylar    | C620            |
|                      | 0.1 uf, 1.5 KV, <u>+20%</u> paper  | C621            |
|                      | 1000 uf, 35V electrolytic          | C622            |

| <u>Part No.</u>   | <u>Description</u>          | <u>Ref. Des</u> |
|-------------------|-----------------------------|-----------------|
| Capacitors (cont) | 470 uf, 25V electrolytic    | C623            |
|                   | 100 uf, 25V electrolytic    | C624            |
|                   | 10 uf, 160V electrolytic    | C625            |
|                   | 100 pf, 500V, +10% ceramic  | C626            |
|                   | 39 pf, 500V, +10% ceramic   | C627            |
|                   | 2200 pf, 500V, +10% ceramic | C628            |
|                   | 6900 pf, 1.5 KV, +5% PP     | C629            |
|                   | 2.2 uf, 50V electrolyte     | C633            |
|                   | 3 pf, 2 kV, +0.5 pf ceramic | C637            |
|                   | .056 uf, 10% mylar          | C638            |
| Miscellaneous     |                             |                 |
|                   | Fuse (UL/CSA) 3A-125        | F601            |
|                   | Socket, 6 pin               | J607            |
|                   | Plug, 3 pin (GT)            | P602            |
|                   | Plug, 4 pin (NM)            | P604            |
|                   | Plug, 6 pin (GT)            | P607            |
|                   | Plug, 3 pin (NM)            | P608            |
|                   | Plug, 2 pin (NM)            | P611            |
|                   | Thermistor                  | TH601           |
|                   | Plug, 6 pin                 | P201            |
|                   | Plug, 6 pin                 | P202            |
| VERT/HOR BOARD    |                             |                 |
| Resistors         |                             |                 |
|                   | 820 Ohm, +5%, 1/8W carbon   | R301            |
|                   | 12k Ohm, +5%, 1/8W carbon   | R302            |
|                   | 15k Ohm, +5%, 1/8W carbon   | R303            |
|                   | 10k Ohm, +5%, 1/8W carbon   | R304            |
|                   | 330k Ohm, +5%, 1/8W carbon  | R305            |
|                   | 1k Ohm, +5%, 1/8W carbon    | R306            |
|                   | 1.5k Ohm, +5%, 1/8W carbon  | R307            |
|                   | 2.2k Ohm, +5%, 1/8 carbon   | R309            |

| <u>Part No.</u>  | <u>Description</u>                 | <u>Ref. Des</u> |
|------------------|------------------------------------|-----------------|
| Resistors (cont) | 470k Ohm, <u>+5%</u> , 1/8W        | R310            |
|                  | 56k Ohm, <u>+5%</u> , 1/8W carbon  | R311            |
|                  | 100k Ohm, <u>+5%</u> , 1/8W carbon | R312            |
|                  | 10k Ohm, <u>+5%</u> , 1/8W carbon  | R313            |
|                  | 47k Ohm, <u>+5%</u> , 1/8W carbon  | R314            |
|                  | 820 Ohm, <u>+5%</u> , 1/8W carbon  | R315            |
|                  | 120 Ohm, <u>+5%</u> , 1/2W carbon  | R316            |
|                  | 2.2 Ohm, <u>+5%</u> , 1/2W carbon  | R317            |
|                  | 33k Ohm, <u>+5%</u> , 1/4W carbon  | R318            |
|                  | 10 Ohm, <u>+5%</u> , 1/8W carbon   | R319            |
|                  | 15k Ohm, <u>+5%</u> , 1/8W carbon  | R320            |
|                  | 560 Ohm, <u>+5%</u> , 1/2W carbon  | R321            |
|                  | 22 Ohm, <u>+5%</u> , 2W MO         | R322            |
|                  | 1.5 Ohm, <u>+5%</u> , 1/8W carbon  | R323            |
|                  | 27k Ohm, <u>+5%</u> , 1/8W carbon  | R234            |
|                  | 47 Ohm, <u>+5%</u> , 1/8W carbon   | R325            |
|                  | 820 Ohm, <u>+5%</u> , 1/8W carbon  | R328            |
|                  | 10k Ohm, <u>+5%</u> , 1/8W carbon  | R330            |
|                  | 220k Ohm, <u>+5%</u> , 1/8W carbon | R331            |
|                  | 2.2k Ohm, <u>+5%</u> , 1/8W carbon | R351            |
|                  | 15k Ohm, <u>+5%</u> , 1/8W carbon  | R352            |
|                  | 18k Ohm, <u>+5%</u> , 1/8W carbon  | R353            |
|                  | 3.9k Ohm, <u>+5%</u> , 1/8W carbon | R354            |
|                  | 12k Ohm, <u>+5%</u> , 1/8W carbon  | R355            |
|                  | 470 Ohm, <u>+5%</u> , 1/8W carbon  | R356            |
|                  | 2.2k Ohm, <u>+5%</u> , 1/8W carbon | R357            |
|                  | 1.2k Ohm, <u>+5%</u> , 1/8W carbon | R358            |
|                  | 68k Ohm, <u>+5%</u> , 1/8W carbon  | R359            |
|                  | 27 Ohm, <u>+5%</u> , 1/4W carbon   | R360            |
|                  | 1.2k Ohm, <u>+5%</u> , 1/8W carbon | R361            |
|                  | 1.2k Ohm, <u>+5%</u> , 1/8W carbon | R363            |
|                  | 47k Ohm, <u>+5%</u> , 1W MO        | R364            |

| <u>Part No.</u>  | <u>Description</u>                  | <u>Ref. Des</u> |
|------------------|-------------------------------------|-----------------|
| Resistors (cont) |                                     |                 |
|                  | 56k Ohm, <u>+5%</u> , 1/2W carbon   | R365            |
|                  | 3.3k Ohm, <u>+5%</u> , 1/8W carbon  | R366            |
|                  | 2.2k Ohm, <u>+5%</u> , 1/2W carbon  | R367            |
|                  | 3.9k Ohm, <u>+5%</u> , 1/8W carbon  | R368            |
|                  | 3.3k Ohm, <u>+5%</u> , 1/4W carbon  | R369            |
|                  | 1k Ohm, <u>+5%</u> , 1/4W carbon    | R370            |
|                  | 2.7k Ohm, <u>+5%</u> 1/4W carbon    | R371            |
|                  | 2.2k Ohm, <u>+5%</u> , 1/4W carbon  | R383            |
|                  | 8.2k Ohm, <u>+5%</u> , 1/4W carbon  | R384            |
|                  | Varistor, 250k Ohm, vert hold       | VR301           |
|                  | Varistor, 20k Ohm, vert size        | VR302           |
|                  | Varistor, 50k Ohm, hor hold         | VR351           |
| Capacitors       |                                     |                 |
|                  | 0.15 uf, 50V <u>+10%</u> mylar      | C301            |
|                  | 0.222 uf, 50V, <u>+10%</u> mylar    | C302            |
|                  | 0.1 uf, 50V, <u>+10%</u> mylar      | C304            |
|                  | 2.2 uf, 50V electrolytic            | C306            |
|                  | 0.15 uf, 50V, <u>+10%</u> mylar     | C307            |
|                  | 0.1 uf, 50V, <u>+10%</u> myar       | C309            |
|                  | 22 uf, 16V electrolytic             | C310            |
|                  | 1000 uf, 35V electrolytic           | C311            |
|                  | 0.0082 uf, 50V, <u>+10%</u> ceramic | C312            |
|                  | 47 uf, 50V electrolytic             | C313            |
|                  | 10 uf, 25V electrolytic             | C315            |
|                  | 3300 uf, 50V, <u>+10%</u> mylar     | C316            |
|                  | 100 pf 50V, <u>+10%</u> ceramic     | C317            |
|                  | 1500 pf, 50V, <u>+10%</u> ceramic   | C351            |
|                  | 1000 pf, 50V, <u>+10%</u> ceramic   | C352            |
|                  | 0.022 uf, 50V, <u>+10%</u> mylar    | C353            |
|                  | 0.1 uf, 50V, <u>+10%</u> mylar      | C355            |
|                  | 4.7 uf, 25V electroytic             | C356            |

| <u>Part No.</u>   | <u>Description</u>                | <u>Ref. Des</u> |
|-------------------|-----------------------------------|-----------------|
| Capacitors (cont) | 0.015 uf, 200V, <u>+10%</u> PP    | C357            |
|                   | 0.018 uf, 200V, <u>+10%</u> PP    | C358            |
|                   | 4.7 uf, 160V electrolytic         | C359            |
|                   | 0.01 uf, 50V, <u>+10%</u> ceramic | C360            |
|                   | 0.015 uf, 50V, <u>+10%</u> mylar  | C361            |
|                   | 10 uf, 50V electrolytic           | C362            |
|                   | 0.01 uf, 640V, <u>+10%</u> PP     | C363            |
|                   | 0.01 uf, 50V, <u>+10%</u> ceramic | C364            |
| Semiconductors    |                                   |                 |
| 482-0282          | Transistor, 2SA826Q               | TR301           |
| 482-0261          | Transistor, 2SC1740Q              | TR302           |
| 482-0283          | Transistor, 2SA1740Q              | TR303           |
| 482-0261          | Transistor, 2SC1740Q              | TR304           |
| 452-0284          | Transistor, 2SA490YLBGLI          | TR305           |
| 482-0285          | Transistor, 2SC1625YLBGLI         | TR306           |
| 482-0261          | Transistor, 2SC1740R              | TR307           |
| 482-0261          | Transistor, 2SC1740Q              | TR308           |
| 482-0117          | Transistor, 2SA854Q               | TR351           |
| 482-0286          | Transistor, 2SC1722BKS            | TR352           |
| 482-0261          | Transistor, 2SC1740Q              | TR353           |
| 482-0282          | Transistor, 2SA826Q               | TR354           |
| 481-0149          | Diode (SI) IS2473-T72             | X301            |
| 481-0149          | Diode (SI) IS2473-T72             | X302            |
| 481-0099          | Diode (GE) IN60TVGL               | X303            |
| 481-0219          | Diode (SI) ISS81                  | X304            |
| 481-0219          | Diode (SI) ISS81                  | X305            |
| 481-0219          | Diode (SI) ISS81                  | X306            |
| 481-0220          | Diode (SI) MA26W                  | X307            |
| 481-0149          | Diode (SI) IS2473                 | X308            |
| 481-0149          | Diode (SI) IS2473-T72             | X351            |
| 481-0149          | Diode (SI) IS2473-T72             | X352            |
| 481-0149          | Diode (SI) IS2473-T72             | X53             |



| <u>Part No.</u>      | <u>Description</u>                 | <u>Ref. Des</u> |
|----------------------|------------------------------------|-----------------|
| 481-0149             | Diode (SI) IS2473-T72              | X54             |
| 481-0221             | Diode (Zener) RD10EBI              | X355            |
| 481-0222             | Diode (HS) RU-1 0.3 US             | X366            |
| Miscellaneous        |                                    |                 |
| 204X9300-958         | Socket, 6 pin                      | J301            |
| 204X9300-958         | Socket, 6 pin                      | J302            |
| 204X9601-195         | Plug, 6 pin                        | P301            |
| 204X9601-195         | Plug, 6 pin                        | P302            |
| 201X0000-534         | Thermistor                         | TH301           |
| Transformers & Coils |                                    |                 |
| 101-0030             | Coil, horiz osc                    | L351            |
| POWER BOARD          |                                    |                 |
| Resistors            |                                    |                 |
|                      | 180 Ohm, <u>+10%</u> m 15W WW      | R501            |
|                      | 100 Ohm, <u>+5%</u> , 1/8W carbon  | R502            |
|                      | 1k Ohm, <u>+5%</u> , 1/8W carbon   | R503            |
|                      | 560 Ohm, <u>+5%</u> , 1/8W carbon  | R504            |
|                      | 39k Ohm, <u>+5%</u> , 1W MO        | R505            |
|                      | 6.8k Ohm, <u>+5%</u> , 1/8W carbon | R506            |
|                      | Varistor volt adj                  | VR501           |
| Capacitors           |                                    |                 |
|                      | 10 uf, 160V electrolytic           | C501            |
|                      | 1500 pf, 50V, <u>+10%</u> ceramic  | C502            |
|                      | 22 uf, 16V electrolytic            |                 |
| Semiconductors       |                                    |                 |
| 482-0261             | Transistor, 2SC1740Q               | TR501           |
| 482-0288             | Transistor, 2SC1454                | TR502           |
| 481-0135             | Diode (SI) zener EQB01-06V         | X501            |
| 481-0149             | Diode (SI) IS2473-T72              | X502            |
| Miscellaneous        |                                    |                 |
|                      | Socket, 6 pin                      | J501            |

| <u>Part No.</u> | <u>Description</u> | <u>Ref. Des</u> |
|-----------------|--------------------|-----------------|
|                 | Plug, 6 pin        | P501            |
|                 | Thermister         | TH501           |

## NECK BOARD

## Resistors

|  |       |
|--|-------|
| 1.8k Ohm, <u>+5%</u> , 1/8W carbon     | R401  |
| 1.8k Ohm, <u>+5%</u> , 1/8W carbon     | R402  |
| 1.8k Ohm, <u>+5%</u> , 1/8W carbon     | R403  |
| 150 Ohm, <u>+5%</u> , 1/8W carbon      | R404  |
| 220 Ohm, <u>+5%</u> , 1/8W carbon      | R405  |
| 150 Ohm, <u>+5%</u> , 1/8W carbon      | R406  |
| 390 Ohm, <u>+5%</u> , 1/4W carbon      | R407  |
| 390 Ohm, <u>+5%</u> , 1/4W carbon      | R408  |
| 4.7k Ohm, <u>+5%</u> , 1/8W carbon     | R409  |
| 4.7k Ohm, <u>+5%</u> , 1/8W carbon     | R410  |
| 4.7k Ohm, <u>+5%</u> , 1/8W carbon     | R411  |
| 12k Ohm, <u>+5%</u> , 2.0W metal oxide | R412  |
| 12k Ohm, <u>+5%</u> , 2.0W metal oxide | R413  |
| 12k Ohm, <u>+5%</u> , 2.0W metal oxide | R414  |
| 2.7k Ohm, <u>+10%</u> , 1/2W comp      | R415  |
| 2.7k Ohm, <u>+10%</u> , 1/2W comp      | R416  |
| 2.7k Ohm, <u>+10%</u> , 1/2W comp      | R417  |
| 470k Ohm, <u>+10%</u> , 1/2W comp      | R418  |
| 330k Ohm, <u>+10%</u> , 1/2W comp      | R419  |
| 1.0 Ohm, <u>+10%</u> , 2W metal oxide  | R422  |
| 270 Ohm, <u>+5%</u> , 1/4W carbon      | R423  |
| 500 Ohm varistor R drive               | VR401 |
| 500 Ohm varistor B drive               | VR402 |
| 5k Ohm varistor R cutoff               | VR403 |
| 5k Ohm varistor G cutoff               | VR404 |
| 5k Ohm varistor B cutoff               | VR405 |
| 1M Ohm varistor screen                 | VR406 |

| <u>Part No.</u>                               | <u>Description</u>                   | <u>Ref. Des</u> |
|---|--------------------------------------|-----------------|
| <b>Capacitors</b>                             |                                      |                 |
|   | 1000 pf, 50V, 10% ceramic            | C401            |
|   | 1000 pf, 50V, 10% ceramic            | C402            |
|   | 1000 pf, 50V, 10% ceramic            | C403            |
|   | 1500 pf, 2 kV, <u>+10%</u> ceramic   | C404            |
|   | 100 pf, 12 kV, <u>+10%</u> ceramic   | C405            |
|   | .01 uf, 500V, <u>+10%</u> ceramic    | C406            |
|   | 1500 pf, 2 kV, <u>+10%</u> ceramic   | C407            |
|   | 68 pf, 50V, <u>+10%</u> ceramic      | C408            |
|   | 68 pf, 50V, <u>+10%</u> ceramic      | C409            |
|   | 68 pf, 50V, <u>+10%</u> ceramic      | C410            |
| <b>Semiconductors</b>                         |                                      |                 |
| 482-0155                                      | Transistor, 2SC1514 (R output)       | TR401           |
| 482-0155                                      | Transistor, 2SC1514 (G output)       | TR402           |
| 482-0155                                      | Transistor, 2SC1514 (B output)       | TR403           |
| 481-0223                                      | Diode, IS2367 (B output)             | X404            |
| 481-0223                                      | Diode, IS2367 (protector)            | X405            |
| 481-0223                                      | Diode, IS2367 (protector)            | X406            |
| <b>Miscellaneous</b>                          |                                      |                 |
|   | Socket, 5 pin                        | J401            |
|   | Socket, 3 pin                        | J402            |
|   | Plug, 5 pin                          | P401            |
|   | Plug, 3 pin                          | P402            |
| <b>800-3253 High Voltage Assembly (T7010)</b> |                                      |                 |
|   | 6.8 Ohm, <u>+10%</u> 15W WW resistor | R701            |
| 220-0223                                      | Focus control                        | VR702           |
|   | Diode (SI HV) )                      | X701            |
|   | Diode (SI HV) ) Part of T701         | X702            |
|   | Diode (SI HV) )                      | X703            |

| <u>Part No.</u> | <u>Description</u> | <u>Ref. Des.</u> |
|-----------------|--------------------|------------------|
|-----------------|--------------------|------------------|

## Final Assembly Parts

|          |                                       |  |
|----------|---------------------------------------|--|
| 200-0020 | 19VJTP22 pix tube                     |  |
| 800-3254 | Assy purity shld/degaussing           |  |
| 800-3255 | Lateral/purity assembly               |  |
| 200-0066 | Yoke, deflection                      |  |
| 213-0021 | CRT socket                            |  |
| 800-3253 | HV unit (T701)                        |  |
|          | Plug, line cord (K4625, K4675, K4677) |  |
|          | Plug, line cord (K4626, K4676)        |  |
| 180-0021 | Degaussing coil (L701)                |  |
|          | INTERFACE FACE BOARD (P317)           |  |

## Resistors

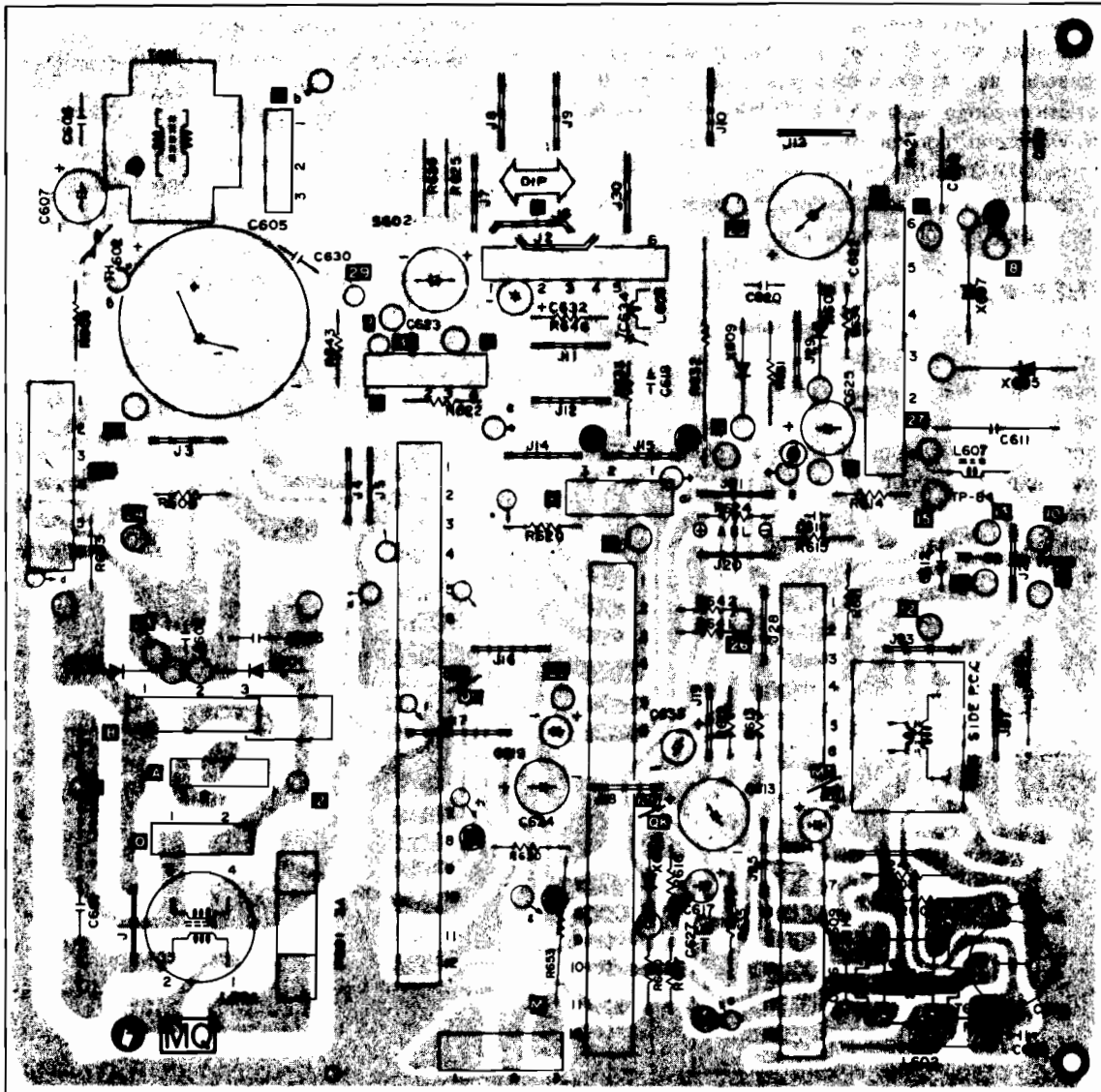
|                                    |      |
|------------------------------------|------|
| 91 Ohm <u>+5%</u> , 1/2W carbon    | R201 |
| 22k Ohm, <u>+10%</u> , 1/4W carbon | R202 |
| 1k Ohm, <u>+5%</u> , 1/2W carbon   | R203 |
| 100 Ohm, <u>+5%</u> , 1/4W carbon  | R204 |
| 100k Ohm, <u>+5%</u> , 1/4W carbon | R205 |
| 330 Ohm, <u>+10%</u> , 1/2W carbon | R206 |
| 2.2k Ohm, <u>+5%</u> , 1/4W carbon | R207 |
| 2.2k Ohm, <u>+5%</u> , 1/4W carbon | R208 |
| 100k Ohm, <u>+5%</u> , 1/4W carbon | R209 |
| 100 Ohm, <u>+5%</u> , 1/4W carbon  | R210 |
| 220 Ohm, <u>+5%</u> , 1/4W carbon  | R211 |
| 220 Ohm, <u>+5%</u> , 1/4W carbon  | R212 |
| 220 Ohm <u>+5%</u> , 1/4W carbon   | R213 |
| 150 Ohm, <u>+5%</u> , 1/4W carbon  | R214 |
| 150 Ohm, <u>+5%</u> , 1/4W carbon  | R215 |
| 150 Ohm, <u>+5%</u> , 1/4W carbon  | R216 |
| 100 Ohm, <u>+5%</u> , 1/4W carbon  | R217 |
| 1k Ohm, <u>+5%</u> , 1/2W carbon   | R218 |
| 1k Ohm, <u>+5%</u> , 1/2W carbon   | R219 |
| 680 Ohm, <u>+5%</u> , 1/2W carbon  | R220 |

| <u>Part No.</u>  | <u>Description</u>                  | <u>Ref. Des.</u> |
|------------------|-------------------------------------|------------------|
| Resistors (cont) | 270 Ohm, <u>+5%</u> , 1/2W carbon   | R221             |
|                  | 270 Ohm, <u>+5%</u> , 1/2W carbon   | R222             |
|                  | 100k Ohm, <u>+5%</u> , 1/4W carbon  | R223             |
|                  | 1k Ohm, <u>+5%</u> , 1/2W carbon    | R224             |
|                  | 8.2k Ohm, <u>+5%</u> , 1/4W carbon  | R225             |
|                  | 8.2k Ohm, <u>+5%</u> , 1/4W carbon  | R226             |
|                  | 8.2k Ohm, <u>+5%</u> , 1/4W carbon  | R227             |
|                  | 390 Ohm, <u>+5%</u> , 1/2W carbon   | R228             |
|                  | 1.5k Ohm black level control        | VR201            |
|                  | 10k Ohm horizontal centering        | VR202            |
| Capacitors       |                                     |                  |
|                  | 1000 uf, 16V electrolytic           | C201             |
|                  | 470 uf, 16V lytic                   | C202             |
|                  | .022 uf, 10% 100V                   | C203             |
|                  | 680 pf, 10%, Z5F                    | C204             |
|                  | .01 uf, 10%, 100V                   | C205             |
| Semiconductors   |                                     |                  |
| 482-0030         | Transistor (NPN) 2N3904             | TR201            |
| 482-0030         | Transistor (NPN) 2N3904             | TR202            |
| 482-0030         | Transistor (NPN) 2N3904             | TR203            |
| 482-0289         | Transistor (PNP) MPS-A70            | TR204            |
| 482-0289         | Transistor (PNP) MPS-A70            | TR205            |
| 482-0289         | Transistor (PNP) MPS-A70            | TR206            |
| 482-0030         | Transistor (NPN) 2N3904             | TR207            |
| 482-0030         | Transistor (NPN) 2N3904             | TR208            |
| 482-0030         | Transistor (NPN) 2N3904             | TR209            |
| 482-0030         | Transistor (NPN) 2N3904             | TR210            |
| 481-0224         | Diode silicon FDH-444               | X201             |
| 481-0224         | Diode silicon FDH-444               | X202             |
| 481-0224         | Diode silicon FDH-444               | X203             |
| 481-0224         | Diode silicon FDH-444               | X204             |
| 481-0014         | Diode, zener 3.9V, 5%, 0.5W IN5228B | ZD201            |

| <u>Part No.</u>      | <u>Description</u>                 | <u>Ref. Des.</u> |
|----------------------|------------------------------------|------------------|
| <b>Miscellaneous</b> |                                    |                  |
|                      | Socket, 6 pin                      | J201             |
|                      | Socket, 6 pin                      | J202             |
|                      | Plug, 4 pin                        | P203             |
|                      | Plug, 3 pin                        | P204             |
|                      | Plug, 6 pin                        | P205             |
| <b>Resistors</b>     |                                    |                  |
|                      | 91 Ohm <u>+5%</u> , 1/2W carbon    | R201             |
|                      | 22k Ohm, <u>+10%</u> , 1/4W carbon | R202             |
|                      | 1k Ohm, <u>+5%</u> , 1/2W carbon   | R203             |
|                      | 100 Ohm, <u>+5%</u> , 1/4W carbon  | R204             |
|                      | 100k Ohm, <u>+5%</u> , 1/4W carbon | R205             |
|                      | 330 Ohm, <u>+10%</u> , 1/2W carbon | R206             |
|                      | 2.2k Ohm, <u>+5%</u> , 1/4W carbon | R207             |
|                      | 2.2k Ohm, <u>+5%</u> , 1/4W carbon | R208             |
|                      | 100k Ohm, <u>+5%</u> , 1/4W carbon | R209             |
|                      | 100 Ohm, <u>+5%</u> , 1/4W carbon  | R210             |
|                      | 200 Ohm, <u>+5%</u> , 1/4W carbon  | R211             |
|                      | 200 Ohm, <u>+5%</u> , 1/4W carbon  | R212             |
|                      | 200 Ohm <u>+5%</u> , 1/4W carbon   | R213             |
|                      | 200 Ohm, <u>+5%</u> , 1/4W carbon  | R214             |
|                      | 200 Ohm, <u>+5%</u> , 1/4W carbon  | R215             |
|                      | 200 Ohm, <u>+5%</u> , 1/4W carbon  | R216             |
|                      | 100 Ohm, <u>+5%</u> , 1/4W carbon  | R217             |
|                      | 1k Ohm, <u>+5%</u> , 1/2W carbon   | R218             |
|                      | 1k Ohm, <u>+5%</u> , 1/2W carbon   | R219             |
|                      | 1k Ohm, 5%, 1/2W carbon            | R220             |
|                      | 200 Ohm, 5%, 1/2W carbon           | R221             |
|                      | 200 Ohm, 5%, 1/2W carbon           | R222             |
|                      | 100k Ohm, 5%, 1/4W carbon          | R223             |
|                      | 680k Ohm, 5%, 1/2W carbon          | R224             |
|                      | 8.2k Ohm, 5%, 1/4W carbon          | R225             |

| <u>Part No.</u>  | <u>Description</u>                  | <u>Ref. Des.</u> |
|------------------|-------------------------------------|------------------|
| Resistors (cont) | 8.2k Ohm, 5%, 1/4W carbon           | R226             |
|                  | 8.2k Ohm, 5%, 1/4W carbon           | R227             |
|                  | 390 Ohm, 5%, 1/2W carbon            | R228             |
|                  | 1.5k Ohm black level control        | VR201            |
|                  | 10k Ohm horizontal centering        | VR202            |
| Capacitors       |                                     |                  |
|                  | 1000 uf, 16V electrolytic           | C201             |
|                  | 470 uf, 16V lytic                   | C202             |
|                  | .022 uf, 10% 100V                   | C203             |
|                  | 680 pf, 10%, Z5F                    | C204             |
|                  | .01 uf, 10%, 100V                   | C205             |
| Semiconductors   |                                     |                  |
| 482-0030         | Transistor (NPN) 2N3904             | TR201            |
| 482-0030         | Transistor (NPN) 2N3904             | TR202            |
| 482-0030         | Transistor (NPN) 2N3904             | TR203            |
| 482-0289         | Transistor (PNP) MPS-A70            | TR204            |
| 482-0289         | Transistor (PNP) MPS-A70            | TR205            |
| 482-0289         | Transistor (PNP) MPS-A70            | TR206            |
| 482-0030         | Transistor (NPN) 2N3904             | TR207            |
| 482-0030         | Transistor (NPN) 2N3904             | TR208            |
| 482-0030         | Transistor (NPN) 2N3904             | TR209            |
| 482-0030         | Transistor (NPN) 2N3904             | TR210            |
| 481-0224         | Diode silicon FDH-444               | X201             |
| 481-0224         | Diode silicon FDH-444               | X202             |
| 481-0224         | Diode silicon FDH-444               | X203             |
| 481-0224         | Diode silicon FDH-444               | X204             |
| 481-0014         | Diode, zener 3.9V, 5%, 0.5W IN5228B | ZD201            |
| Miscellaneous    |                                     |                  |
|                  | Socket, 6 pin                       | J201             |
|                  | Socket, 6 pin                       | J202             |
|                  | Plug, 4 pin                         | P203             |
|                  | Plug, 3 pin                         | P204             |
|                  | Plug, 6 pin                         | P205             |

P.C. BOARD LAYOUT





P.C. BOARD LAYOUT

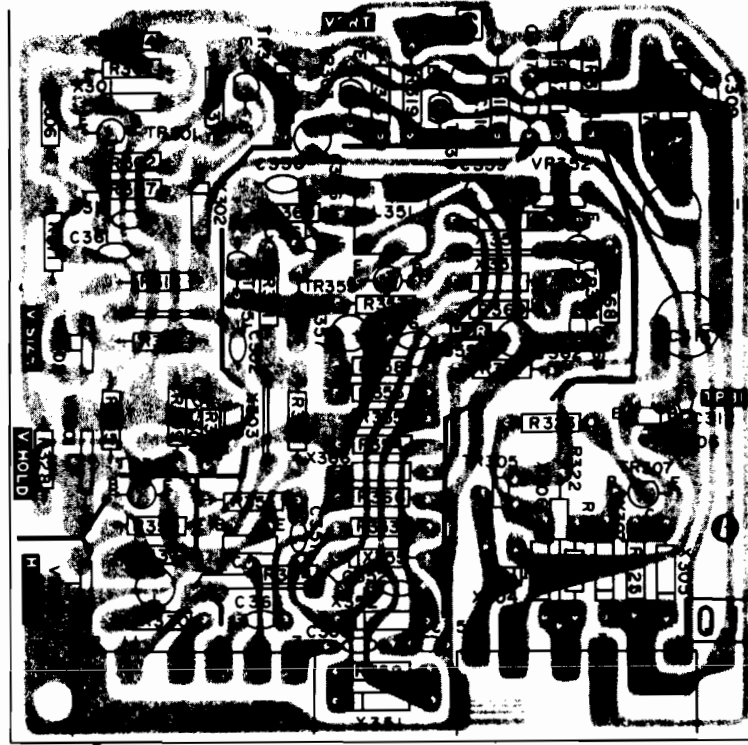
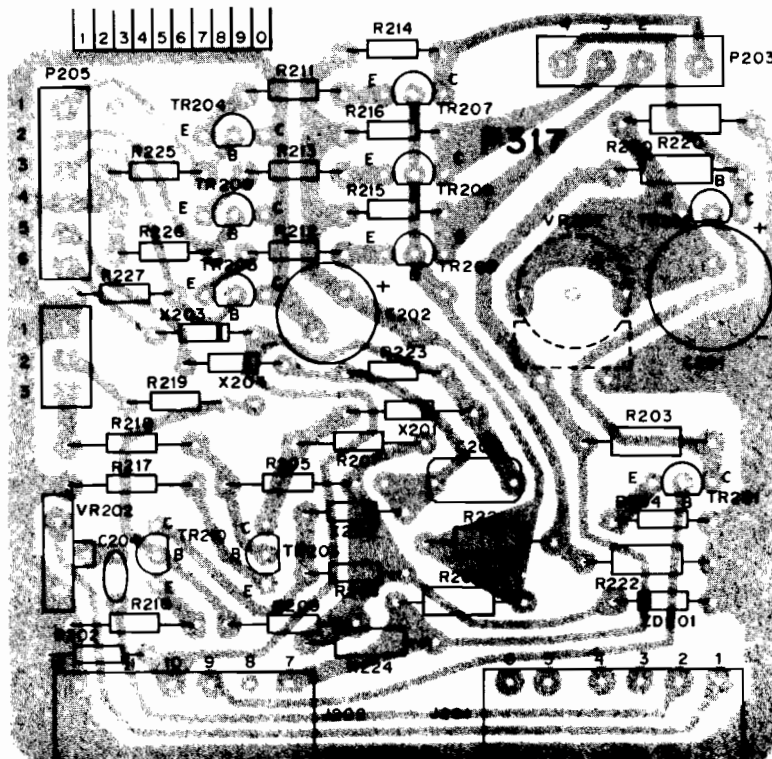


FIGURE 15. HORIZ/VERT P.C. BOARD



P.C. BOARD LAYOUT

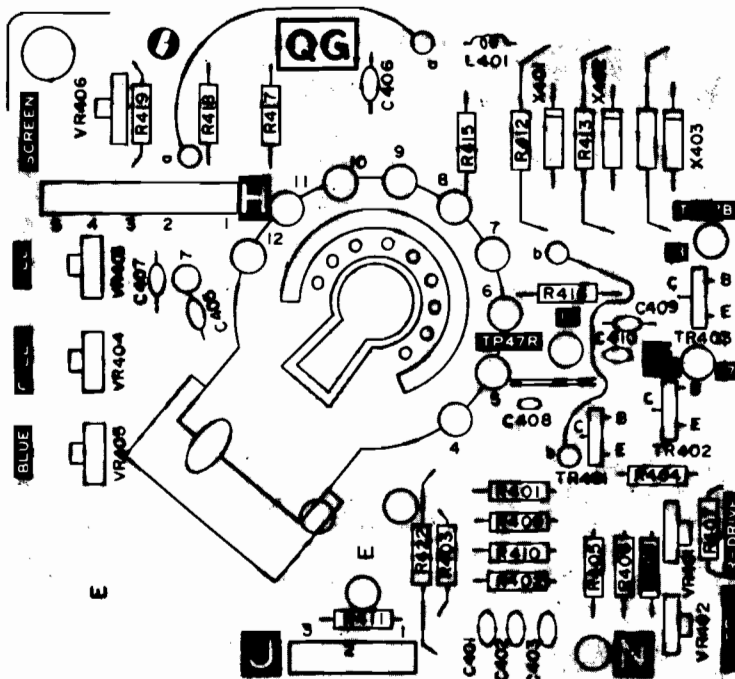
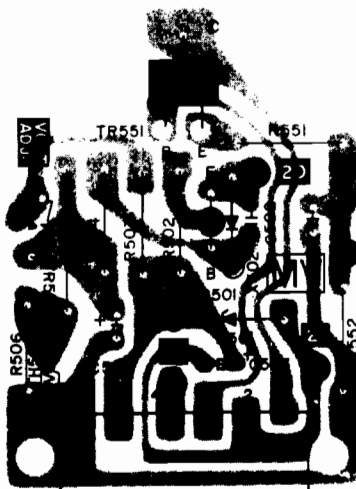
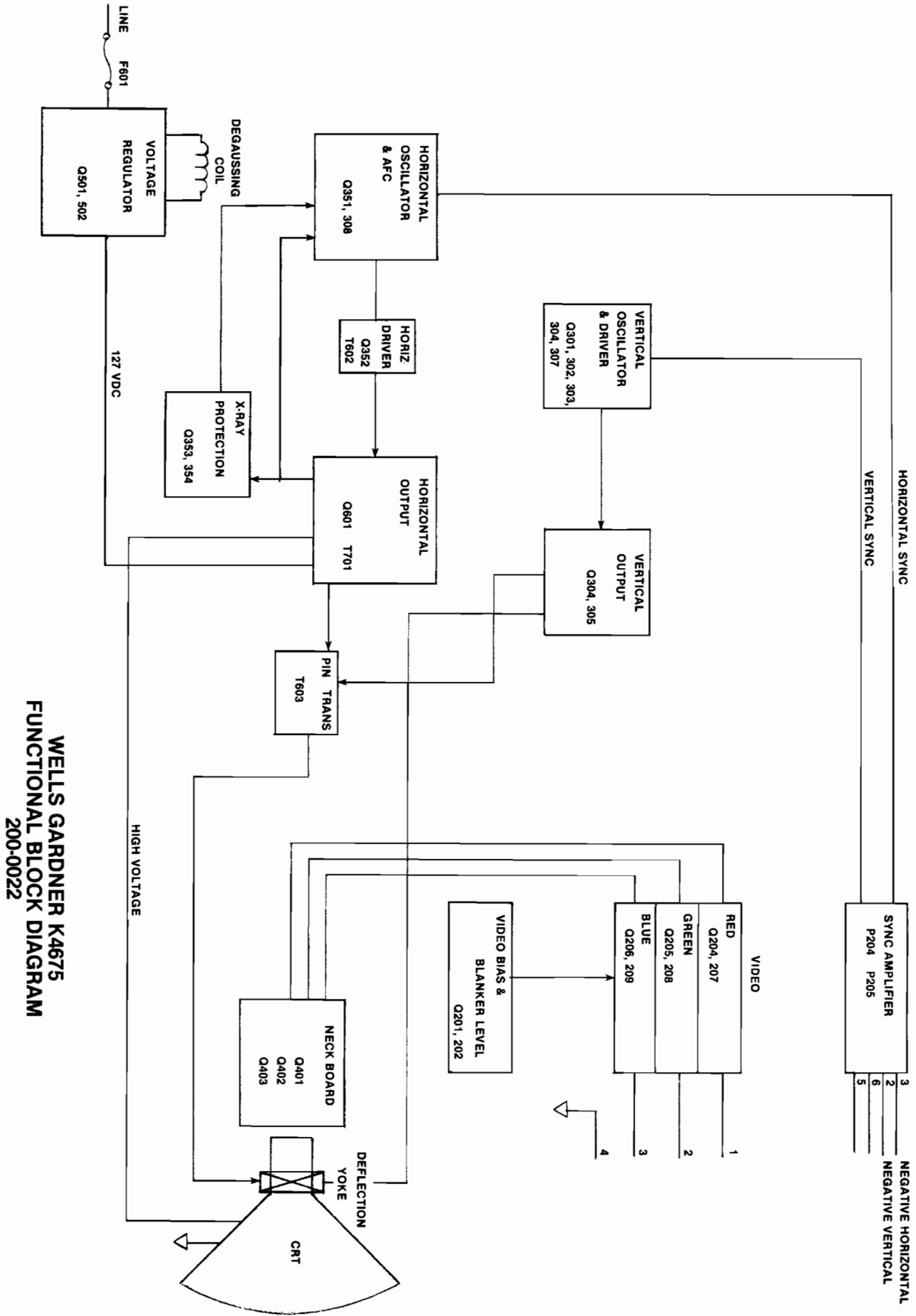


FIGURE 13. NECK P.C. BOARD





WELLS GARDNER K4675  
FUNCTIONAL BLOCK DIAGRAM  
200-0022

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>         | <u>REF. DESG.</u> |
|-----------------|-----------------|----------------------------|-------------------|
| CAPACITORS      |                 |                            |                   |
| 1               |                 | 1000 uF, 16V, Electrolytic | C201              |
| 2               |                 | 330 pF, 500V, Ceramic      | C202              |
| 3               |                 | 220 pF, 500V, Ceramic      | C203              |
| 4               |                 | 220 pF, 500V, Ceramic      | C204              |
| 5               |                 | 470 uF, 16V, Electrolytic  | C205              |
| 6               |                 | 0.1 uF, 125V Mylar         | C206              |
| 7               |                 | .022 uF, 100V Mylar        | C207              |
| 8               |                 | 330 uF, 50V Electrolytic   | C301              |
| 9               |                 | 0.033 uF, 50V Mylar        | C302              |
| 10              |                 | 3.3 uF, 50V Electrolytic   | C303              |
| 11              |                 | 0.068 pF, 50V Mylar        | C304              |
| 12              |                 | 2.2 uF, 16V Tantal         | C306              |
| 13              |                 | 0.033 uF, 50V Mylar        | C307              |
| 14              |                 | 3.3 uF, 50V Electrolytic   | C308              |
| 15              |                 | 0.068 uF, 100V PP          | C309              |
| 16              |                 | 10 uF, 100V Electrolytic   | C310              |
| 17              |                 | 10 uF, 160V Electrolytic   | C311              |
| 18              |                 | 1000 pF, 500V Ceramic      | C312              |
| 19              |                 | 47 uF, 160V Electrolytic   | C313              |
| 20              |                 | 0.033 uF, 200V PP          | C314              |
| 21              |                 | 1 uF, 50V Electrolytic     | C315              |
| 22              |                 | 1 uF, 50V Electrolytic     | C351              |
| 23              |                 | 47 uF, 25V Electrolytic    | C352              |
| 24              |                 | 0.0082 pF, 50V Mylar-PP    | C353              |
| 25              |                 | 47 uF, 25V Electrolytic    | C354              |
| 26              |                 | 0.0068 pF, 50V Mylar       | C355              |
| 27              |                 | 0.01 uF, 500V Ceramic      | C356              |
| 28              |                 | 100 pF, 500V Ceramic       | C359              |
| 29              |                 | 0.0033 pF, 500V Ceramic    | C360              |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>        | <u>REF. DESG.</u> |
|-----------------|-----------------|---------------------------|-------------------|
| CAPACITORS      |                 |                           |                   |
| 30              |                 | 0.01 uF, 500V Ceramic     | C361              |
| 31              |                 | 0.01 uF, 50V Ceramic      | C362              |
| 32              |                 | 8700 pF, 1.5 KV PP        | C363              |
| 33              |                 | 0.33 uF, 200V PP          | C365              |
| 34              | 150-0074        | 22 uF, 25V Electrolytic   | C366              |
| 35              |                 | 6 uF, 500V Ceramic        | C367              |
| 36              |                 | 0.01 uF, 50V Ceramic      | C368              |
| 37              |                 | 0.1 uF, 100V PP           | C372              |
| 38              |                 | 470 uF, 500V Ceramic      | C380              |
| 39              |                 | 0.1 uF, 125V Mylar        | C501              |
| 40              |                 | 1500 pF, 500V Ceramic     | C502              |
| 41              |                 | 2200 pF, 125V Ceramic     | C503              |
| 42              |                 | 2200 pF, 125V Ceramic     | C504              |
| 43              |                 | 560 uF, 200V Electrolytic | C505              |
| 44              |                 | 22 uF, 160V Electrolytic  | C506              |
| 45              |                 | 47 uF, 160V Electrolytic  | C507              |
| 46              |                 | 1000 uF, 25V Electrolytic | C701              |
| 47              |                 | 10 uF, 100V Electrolytic  | C702              |
| 48              |                 | 1000 pF, 500V Ceramic     | C703              |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>        | <u>REF. DESG.</u> |
|-----------------|-----------------|---------------------------|-------------------|
| RESISTORS       |                 |                           |                   |
| 1               |                 | 1K Ohm, 5%, 1/4W Carbon   | R201              |
| 2               |                 | 30 Ohm, 5%, 1/4W Carbon   | R202              |
| 3               |                 | 100 Ohm, 5%, 1/4W Carbon  | R203              |
| 4               |                 | 100 Ohm, 5%, 1/2W Carbon  | R204              |
| 5               |                 | 270 Ohm, 5%, 1/2W Carbon  | R205              |
| 6               |                 | 390 Ohm, 5%, 1/4W Carbon  | R206              |
| 7               |                 | 200 Ohm, 5%, 1/4W Carbon  | R207              |
| 8               |                 | 390 Ohm, 5%, 1/4W Carbon  | R208              |
| 9               |                 | 200 Ohm, 5%, 1/4W Carbon  | R209              |
| 10              |                 | 390 Ohm, 5%, 1/4W Carbon  | R210              |
| 11              |                 | 200 Ohm, 5%, 1/4W Carbon  | R211              |
| 12              |                 | 1K Ohm, 5%, 1/4W Carbon   | R214              |
| 13              |                 | 100K Ohm, 5%, 1/4W Carbon | R215              |
| 14              |                 | 1K Ohm, 5%, 1/4W Carbon   | R216              |
| 15              |                 | 100 Ohm, 5%, 1/4W Carbon  | R217              |
| 16              |                 | 1K Ohm, 5%, 1/4W Carbon   | R218              |
| 17              |                 | 100K Ohm, 5%, 1/4W Carbon | R219              |
| 18              |                 | 1K Ohm, 5%, 1/4W Carbon   | R220              |
| 19              |                 | 100 Ohm, 5%, 1/4W Carbon  | R221              |
| 20              |                 | 3.3 Ohm, 5%, 1/4W Carbon  | R222              |
| 21              |                 | 10 Ohm, 5%, 1/4W Carbon   | R224              |
| 22              |                 | 10 Ohm, 5%, 1/4W Carbon   | R225              |
| 23              |                 | 10 Ohm, 5%, 1/4W Carbon   | R226              |
| 24              |                 | 47K Ohm, 5%, 1/4W Carbon  | R227              |
| 25              |                 | 1K Ohm, 5%, 1/4W Carbon   | R228              |
| 26              |                 | 270 Ohm, 5%, 1/2W Carbon  | R229              |
| 27              |                 | 8.2K Ohm, 5%, 1/2W Comp.  | R230              |
| 28              |                 | 8.2K Ohm, 5%, 1/2W Comp.  | R231              |
| 29              |                 | 8.2K Ohm, 5%, 1/2W Comp.  | R232              |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>        | <u>REF. DESG.</u> |
|-----------------|-----------------|---------------------------|-------------------|
| RESISTORS       |                 |                           |                   |
| 30              |                 | 180 Ohm, 5%, 1/4W Carbon  | R233              |
| 31              |                 | 82 Ohm, 5%, 1/4W Carbon   | R234              |
| 32              |                 | 82 Ohm, 5%, 1/4W Carbon   | R235              |
| 33              |                 | 82 Ohm, 5%, 1/4W Carbon   | R236              |
| 34              |                 | 270 Ohm, 5%, 1/4W Carbon  | R301              |
| 35              |                 | 8.2K Ohm, 5%, 1/4W Carbon | R302              |
| 36              |                 | 8.2K Ohm, 5%, 1/4W Carbon | R303              |
| 37              |                 | 2.2K Ohm, 5%, 1/4W Carbon | R304              |
| 38              |                 | 6.8K Ohm, 5%, 1/4W Carbon | R305              |
| 39              |                 | 7.5K Ohm, 5%, 1/4W Carbon | R306              |
| 40              |                 | 5.6K Ohm, 5%, 1/4W Carbon | R307              |
| 41              |                 | 22K Ohm, 5%, 1/4W Carbon  | R309              |
| 42              |                 | 39K Ohm, 5%, 1/4W Carbon  | R310              |
| 43              |                 | 3.3K Ohm, 5%, 1/4W Carbon | R311              |
| 44              |                 | 4.7K Ohm, 5%, 1/4W Carbon | R312              |
| 45              |                 | 1K Ohm, 5%, 5W Carbon     | R313              |
| 46              |                 | 220 Ohm, 5%, 1/4W Carbon  | R314              |
| 47              |                 | 10 Ohm, 5%, 1/4W Carbon   | R315              |
| 48              |                 | 3.3K Ohm, 5%, 1/4W Carbon | R316              |
| 49              |                 | 12 Ohm, 5%, 1/2W Carbon   | R317              |
| 50              |                 | 390 Ohm, 5%, 1/4W Carbon  | R318              |
| 51              |                 | 1K Ohm, 5%, 1/4W Carbon   | R319              |
| 52              |                 | 33K Ohm, 5%, 1/4W Carbon  | R320              |
| 53              |                 | 270K Ohm, 5%, 1/2W Carbon | R321              |
| 54              |                 | 10K Ohm, 5%, 1/4W Carbon  | R322              |
| 55              |                 | 10K Ohm, 5%, 1/4W Carbon  | R351              |
| 56              |                 | 3.9K Ohm, 5%, 1/4W Carbon | R352              |
| 57              |                 | 68K Ohm, 5%, 1/4W Carbon  | R353              |
| 58              |                 | 3.3K Ohm, 5%, 1/4W Carbon | R354              |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           | <u>REF. DESG.</u> |
|-----------------|-----------------|------------------------------|-------------------|
| RESISTORS       |                 |                              |                   |
| 59              |                 | 6.8K Ohm, 5%, 3W Metal Oxide | R355              |
| 60              |                 | 56K Ohm, 5%, 1/2W Carbon     | R358              |
| 61              |                 | 470 Ohm, 5%, 1/4W Carbon     | R360              |
| 62              |                 | 10K Ohm, 5%, 1/4W Carbon     | R361              |
| 63              |                 | 1.8K Ohm, 5%, 1W Metal Oxide | R362              |
| 64              |                 | 3.9K Ohm, 5%, 7W Metal Oxide | R363              |
| 65              |                 | 22 Ohm, 5%, 1/4W Carbon      | R364              |
| 66              |                 | 33K Ohm, 5%, 1/4W Carbon     | R365              |
| 67              |                 | 10K Ohm, 5%, 1/4W Carbon     | R367              |
| 68              |                 | 330K Ohm, 5%, 1/2W Comp.     | R368              |
| 79              |                 | 680K Ohm, 5%, 1/2W Comp.     | R369              |
| 70              |                 | 33K Ohm, 5%, 1/4W Carbon     | R370              |
| 71              |                 | 1K Ohm, 5%, 1W Metal Oxide   | R371              |
| 72              |                 | 12K Ohm, 5%, 1W Metal Oxide  | R372              |
| 73              |                 | 6.8K Ohm, 5%, 1/2W Carbon    | R375              |
| 74              |                 | 270 Ohm, 5%, 2W Metal Oxide  | R376              |
| 75              |                 | 150 Ohm, 5%, 1/4W Carbon     | R377              |
| 76              |                 | 10K Ohm, 5%, 1/4W Carbon     | R378              |
| 77              |                 | 10K Ohm, 5%, 1/4W Carbon     | R379              |
| 78              |                 | 8.2K Ohm, 5%, 1/4W Carbon    | R380              |
| 79              |                 | 2.2K Ohm, 5%, 1W Metal Oxide | R381              |
| 80              |                 | 150 Ohm, 5%, 1W Metal Oxide  | R383              |
| 81              |                 | 10K Ohm, 5%, 1/4W Carbon     | R502              |
| 82              |                 | 150 Ohm, 5%, 15W Metal Oxide | R503              |
| 83              |                 | 47 Ohm, 5%, 1W Metal Oxide   | R504              |
| 84              |                 | 2.2K Ohm, 5%, 1/4W Carbon    | R505              |
| 85              |                 | 15 Ohm, 5%, 2W Metal Oxide   | R506              |
| 86              |                 | 330K Ohm, 5%, 1/2W Comp.     | R507              |
| 87              |                 | 3.3 Ohm, 5%, 10W WW          | R601              |



## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>          | <u>REF. DESG.</u> |
|-----------------|-----------------|-----------------------------|-------------------|
| RESISTORS       |                 |                             |                   |
| 88              |                 | 2.2 Ohm, 5%, 2W Metal Oxide | R701              |
| 89              |                 | 2.2 Ohm, 5%, 1/2W Carbon    | R702              |
| 90              |                 | 2K Ohm-B Semi-Fixed         | VR201             |
| 91              |                 | 5K Ohm-B Semi-Fixed         | VR301             |
| 92              |                 | 500 Ohm-B Semi-Fixed        | VR303             |
| 93              |                 | 2K Ohm-B Semi-Fixed         | VR351             |
| 94              |                 | 2K Ohm-B Semi-Fixed         | VR352             |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           | <u>REF. DESG.</u> |
|-----------------|-----------------|------------------------------|-------------------|
| SEMICONDUCTORS  |                 |                              |                   |
| 1               | 481-0175        | Diode, IS2076-27             | D203              |
| 2               | 481-0175        | Diode, IS2076-27             | D204              |
| 3               | 481-0175        | Diode, IS2076-27             | D205              |
| 4               | 481-0175        | Diode, IS2076-27             | D206              |
| 5               | 481-0175        | Diode, IS2076-27             | D207              |
| 6               | 481-0175        | Diode, IS2076-27             | D208              |
| 7               | 481-0175        | Diode, IS2076-27             | D209              |
| 8               | 481-0219        | Diode, ISS81                 | D301              |
| 9               | 481-0175        | Diode, IS2076-27             | D302              |
| 10              | 481-0175        | Diode, IS2076-27             | D303              |
| 11              | 481-0244        | Diode, RH-IV                 | D304              |
| 12              | 481-0244        | Diode, RH-IV                 | D305              |
| 13              | 481-0175        | Diode, IS2076-27             | D306              |
| 14              | 481-0245        | Diode, RM-1AV                | D501              |
| 15              | 481-0245        | Diode, RM-1AV                | D502              |
| 16              | 481-0245        | Diode, RM-1AV                | D503              |
| 17              | 481-0245        | Diode, RM-1AV                | D504              |
| 18              | 481-0245        | Diode, RM-1AV                | D505              |
| 19              | 481-0245        | Diode, RM-1AV                | D506              |
| 20              | 481-0217        | Diode, RU-2V                 | D701              |
| 21              | 481-0244        | Diode, RH-1V                 | D702              |
| 22              | 482-0160        | Transistor (NPN) 2SC1815GR   | Q201              |
| 23              | 482-0160        | Transistor (NPN) 2SC1815GR   | Q202              |
| 24              | 482-0301        | Transistor (PNP) 2SA562-Y-TM | Q203              |
| 25              | 482-0301        | Transistor (PNP) 2SA562-Y-TM | Q204              |
| 26              | 482-0301        | Transistor (PNP) 2SA562-Y-TM | Q205              |
| 27              | 482-0160        | Transistor (NPN) 2SC1815GR   | Q206              |
| 28              | 482-0160        | Transistor (NPN) 2SC1815GR   | Q207              |
| 29              | 482-0160        | Transistor (NPN) 2SC1815GR   | Q208              |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>            | <u>REF. DESG.</u> |
|-----------------|-----------------|-------------------------------|-------------------|
| SEMICONDUCTORS  |                 |                               |                   |
| 30              | 482-0302        | Transistor (NPN) 2SC1851GR    | Q209              |
| 31              | 482-0302        | Transistor (NPN) 2SC1851GR    | Q210              |
| 32              | 482-0302        | Transistor (NPN) 2SC1851GR    | Q301              |
| 33              | 482-0161        | Transistor (NPN) 2SC2073LBGL2 | Q302              |
| 34              | 482-0161        | Transistor (NPN) 2SC2073LBGL2 | Q303              |
| 35              | 482-0303        | Transistor (NPN) 2SC2482BK    | Q351              |
| 36              | 482-0202        | Transistor (NPN) 2SD898B      | Q352              |
| 37              | 313-0132        | IC HA11423                    | IC301             |
| 38              | 313-0129        | IC STR381                     | IC501             |

## MAIN BOARD

| <u>ITEM NO.</u>      | <u>PART NO.</u> | <u>DESCRIPTION</u>      | <u>REF. DESG.</u> |
|----------------------|-----------------|-------------------------|-------------------|
| TRANSFORMERS & COILS |                 |                         |                   |
| 1                    | 181-0035        | Coil, (RF Choke)        | L351              |
| 2                    | 181-0036        | Coil, Horiz., Size      | L352              |
| 3                    | 181-0037        | Coil, Adg.              | L701              |
| 4                    | 560-0121        | Transformer, Hor. Drive | T351              |
| 5                    | 560-0122        | HV-Unit M-11            | T352              |

MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>   | <u>REF. DESG.</u> |
|-----------------|-----------------|----------------------|-------------------|
| MISCELLANEOUS   |                 |                      |                   |
| 1               |                 | Fuse, 4 Amp. 125V    | F501              |
| 2               |                 | Recap W Wire 3P-M-BG | J402              |
| 3               |                 | Plug, PWB 3P-J       | P201              |
| 4               |                 | Plug, PWB 6P-Q       | P202              |
| 5               |                 | Plug, PWB 4P-B       | P401              |
| 6               |                 | Plug, PWB 2P-B       | P501              |
| 7               |                 | Plug, PWB 4P-C       | P601              |
| 8               | 478-0012        | Thermistor           | TH501             |

## MAIN BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>             | <u>REF. DESG.</u> |
|-----------------|-----------------|--------------------------------|-------------------|
| FINAL ASSEMBLY  |                 |                                |                   |
| 1               | 200-0093        | 19VLT22 Pix Tube               |                   |
| 2               | 834-5030        | Lateral/Purity Assembly        |                   |
| 3               | 200-0092        | Yoke Deflection                |                   |
| 4               | 834-5031        | CRT Socket                     |                   |
| 5               | 181-0038        | Automatic Degaussing Coil Unit |                   |

## NECK BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           | <u>REF. DESG.</u> |
|-----------------|-----------------|------------------------------|-------------------|
| RESISTORS       |                 |                              |                   |
| 1               |                 | 220 Ohm, 5%, 1/4W Carbon     | R401              |
| 2               |                 | 390 Ohm, 5%, 1/4W Carbon     | R402              |
| 3               |                 | 820 Ohm, 5%, 1/4W Carbon     | R403              |
| 4               |                 | 220 Ohm, 5%, 1/4W Carbon     | R404              |
| 5               |                 | 390 Ohm, 5%, 1/4W Carbon     | R405              |
| 6               |                 | 820 Ohm, 5%, 1/4W Carbon     | R406              |
| 7               |                 | 470 Ohm, 5%, 1/4W Carbon     | R407              |
| 8               |                 | 270 Ohm, 5%, 1/4W Carbon     | R408              |
| 9               |                 | 820 Ohm, 5%, 1/4W Carbon     | R409              |
| 10              |                 | 15K Ohm, 5%, 2W M.O. Forming | R410              |
| 11              |                 | 15K Ohm, 5%, 2W M.O. Forming | R411              |
| 12              |                 | 15K Ohm, 5%, 2W M.O. Forming | R412              |
| 13              |                 | 2.7K Ohm, 5%, 1/2W Comp.     | R413              |
| 14              |                 | 2.7 Ohm, 5%, 1/2W Comp.      | R414              |
| 15              |                 | 2.7K Ohm, 5%, 1/2W Comp.     | R415              |
| 16              |                 | 2.2 Ohm, 5%, 2W Metal Oxide  | R416              |
| 17              |                 | 2.7K Ohm, 5%, 1/4W Carbon    | R419              |
| 18              |                 | 2.7K Ohm, 5%, 1/4W Carbon    | R420              |
| 19              |                 | 2.7K Ohm, 5%, 1/4W Carbon    | R421              |
| 20              |                 | 500 Ohm, -B Semi-Fixed       | VR401             |
| 21              |                 | 500 Ohm, -B Semi-Fixed       | VR402             |
| 22              |                 | 5K Ohm, -B Semi-Fixed        | VR403             |
| 23              |                 | 5K Ohm, -B Semi-Fixed        | VR404             |
| 24              |                 | 5K Ohm, -B Semi-Fixed        | VR405             |

## NECK BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>      | <u>REF. DESG.</u> |
|-----------------|-----------------|-------------------------|-------------------|
| CAPACITORS      |                 |                         |                   |
| 1               |                 | 1200 pF, 500V Ceramic   | C401              |
| 2               |                 | 1000 pF, 500V Ceramic   | C402              |
| 3               |                 | 1000 pF, 500V Ceramic   | C403              |
| 4               |                 | 1500 pF, 1.5 KV Ceramic | C404              |
| 5               |                 | 0.01 uF, 500V Ceramic   | C405              |



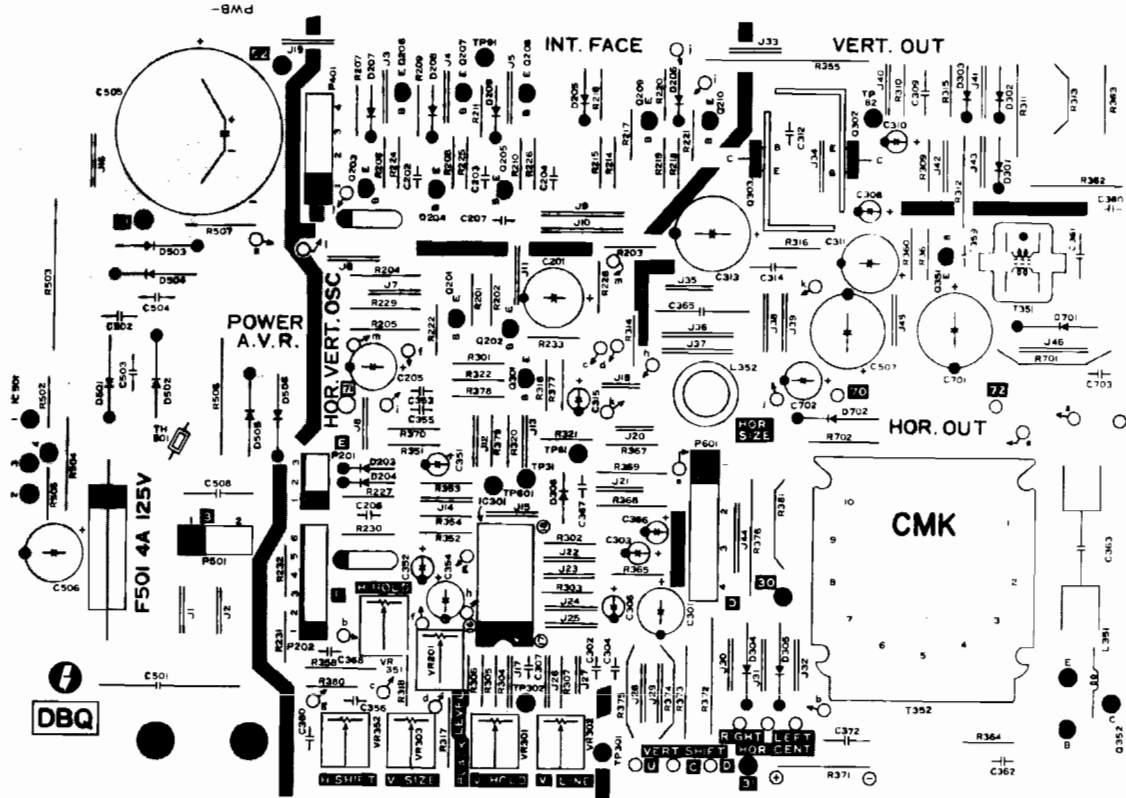
## NECK BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>         | <u>REF. DESG.</u> |
|-----------------|-----------------|----------------------------|-------------------|
| SEMICONDUCTORS  |                 |                            |                   |
| 1               | 482-0304        | Transistor (NPN) 2SC2068LB | Q401              |
| 2               | 482-0304        | Transistor (NPN) 2SC2068LB | Q402              |
| 3               | 482-0304        | Transistor (NPN) 2SC2068LB | Q403              |

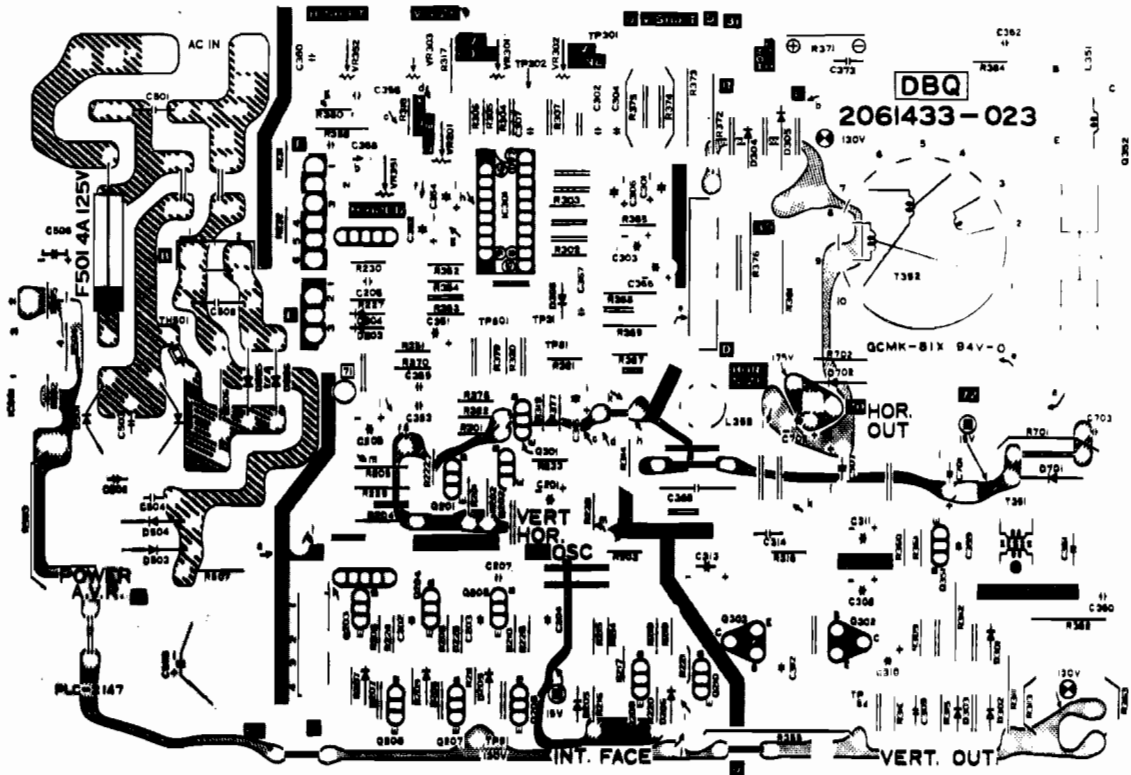
NECK BOARD

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>REF. DESG.</u> |
|-----------------|-----------------|--------------------|-------------------|
|                 |                 | MISCELLANEOUS      |                   |
| 1               |                 | RECEP W Wire 4P-E  | J401              |
| 2               |                 | Plug, PWB 3P-A     | P402              |
| 3               |                 | Plug, Pin 1P-D     | P403              |
| 4               |                 | Plug, PWB 4P-E     | P701              |

P.C. BOARD LAYOUT



TOP VIEW



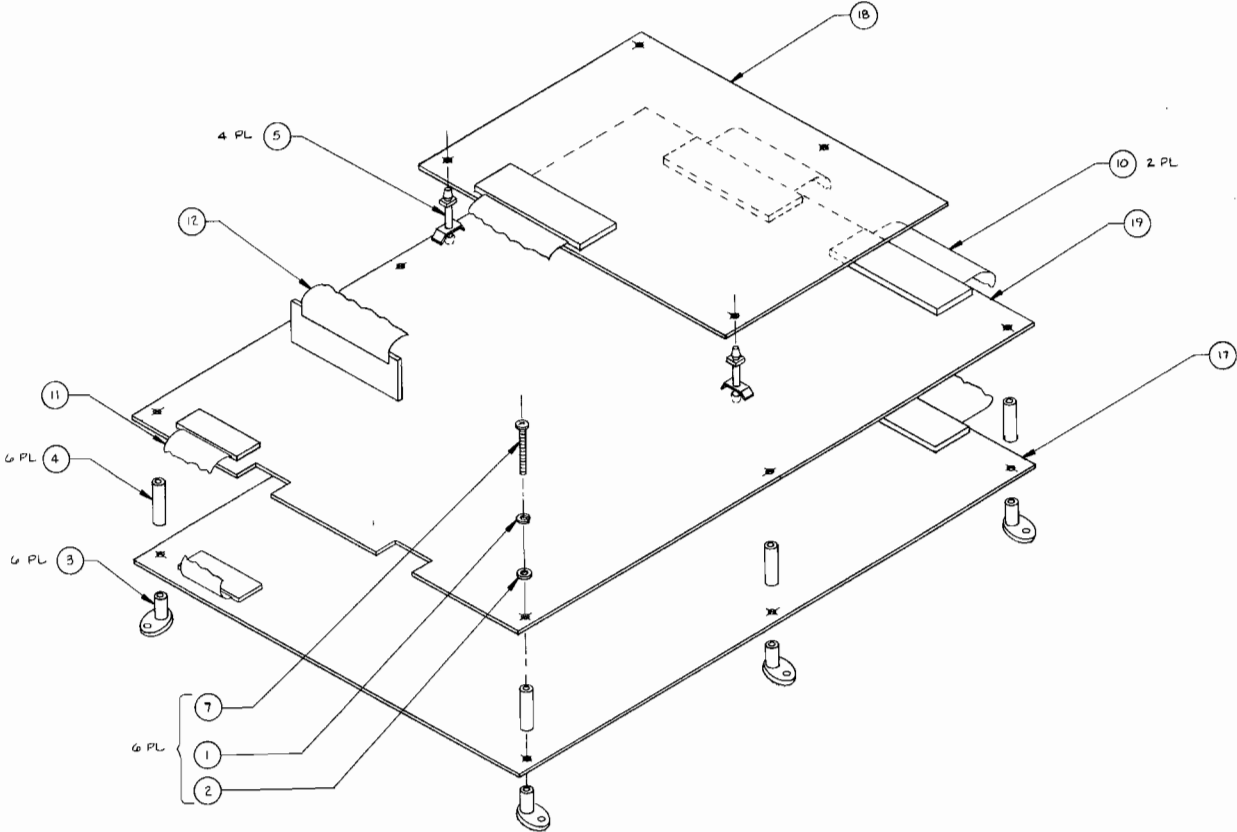
BOTTOM VIEW



## IC BOARD ASSEMBLY

DRAWING NUMBER 834-5197

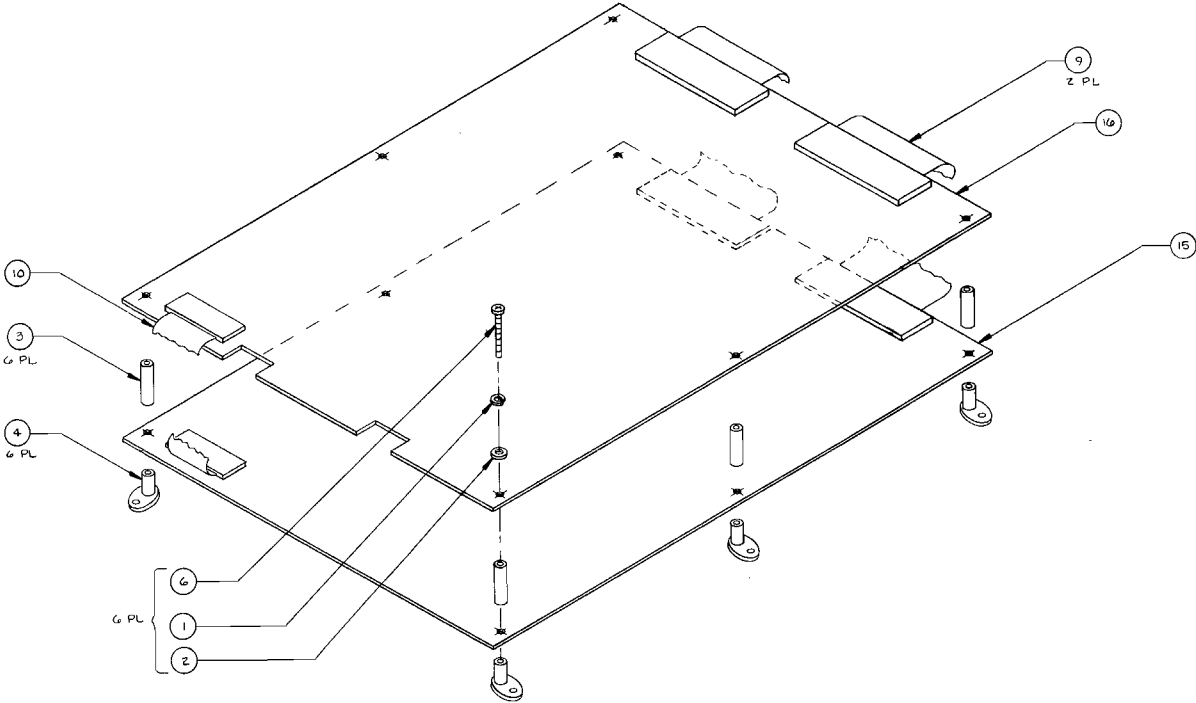
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>       |
|-----------------|-----------------|------------------|--------------------------|
| 1               | 280-0257-00     | 6                | Spring Washer, M3        |
| 2               | 280-0273-00     | 6                | Flat Washer, M3          |
| 3               | 280-0435-00     | 6                | Spacer, 6MM              |
| 4               | 280-0436-00     | 6                | Spacer, 15MM             |
| 5               | 280-5013-00     | 4                | Locking Support          |
| 6               |                 |                  |                          |
| 7               | 285-0002-30     |                  | Screw, M3-0.5 PN HD PHIL |
| 8               |                 |                  |                          |
| 9               |                 |                  |                          |
| 10              | 600-5003-00     | 2                | Fem 50P Flat Cable Assy  |
| 11              | 600-5006-00     | 1                | Fem 10P Flat Cable Assy  |
| 12              | 600-5037-00     | 1                | Fem 40P Flat Cable Assy  |
| 13              |                 |                  |                          |
| 14              | 601-0740        | 6                | S-Lock                   |
| 15              |                 |                  |                          |
| 16              |                 |                  |                          |
| 17              | 834-5167-00     | 1                | Video Board Assy         |
| 18              | 834-5168-00     | 1                | Sound Board Assy         |
| 19              | 834-5166-00     | 1                | Control Board Assy       |



## IC BOARD ASSEMBLY

DRAWING NUMBER 834-5198

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD</u> | <u>DESCRIPTION</u>             |
|-----------------|-----------------|-----------------|--------------------------------|
| 1               | 834-5212        | 1               | Control Board II Assembly      |
| 2               | 834-5167        | 1               | Video Board Assembly           |
| 3               | 600-5003        | 2               | 50P Flat Cable & Fem. Assembly |
| 4               | 600-5006        | 1               | 10P Cable & Fem Assembly       |
| 5               | 601-0740        | 6               | S-Lock                         |
| 6               | 280-0435        | 6               | Spacer Tube 6MM                |
| 7               | 280-0436        | 6               | Spacer Tube 15MM               |
| 8               |                 | 6               | Screw, M3 X 30 P.H.PHIL        |
| 9               | 280-0273        | 6               | Washer, Flat M3                |
| 10              | 280-0257        | 6               | Washer, Spring M3              |
| 11              | 421-5278        | 1               | 834-5198 Decal                 |





## CONTROL BOARD ASSEMBLY

DRAWING NUMBER 834-5166

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>             | <u>REF NO.</u>                 |
|-----------------|-----------------|----------------------------|--------------------------------|--------------------------------|
| 1               | 171-5205        | 1                          | PC Board                       |                                |
| 2               | 530-5004        | 1                          | Heat Sink 6.2 <sup>0</sup> C/W |                                |
| 3               | 421-5256        | 1                          | Sticker 834-5207               |                                |
| 4               | 316-5309        | 1                          | IC 2764 EPR-5309               | U35 (ROM 1)                    |
| 5               | 316-5310        | 1                          | IC 2764 EPR-5310               | U34 (ROM 2)                    |
| 6               | 316-5311        | 1                          | IC 2764 EPR-5311               | U33 (ROM 3)                    |
| 7               | 316-5312        | 1                          | IC 2764 EPR-5312               | U32 (ROM 4)                    |
| 8               | 316-5295        | 1                          | IC 2764 EPR-5295               | U76 (ROM 5)                    |
| 9               | 316-5308        | 1                          | IC TBP 28S42 PR-5308           | U68                            |
| 10              | 315-0041        | 1                          | IC Z80A                        | U4                             |
| 11              | 314-0078        | 1                          | IC 74LS02                      | U42                            |
| 12              | 314-0019        | 6                          | IC 74LS04                      | U6, 20, 29,<br>31, 43, 51      |
| 13              | 314-0058        | 1                          | IC 74LS08                      | U46                            |
| 14              | 314-0059        | 1                          | IC 74LS10                      | U17                            |
| 15              | 314-0060        | 1                          | IC 74LS20                      | U24                            |
| 16              | 314-0066        | 1                          | IC 74LS27                      | U71                            |
| 17              | 314-0067        | 1                          | IC 74LS30                      | U25                            |
| 18              | 314-0068        | 5                          | IC 74LS32                      | U38, 40, 47,<br>54, 80         |
| 19              | 314-0062        | 4                          | IC 74LS74                      | U18, 19, 41,<br>44             |
| 20              | 314-0070        | 1                          | IC 74LS86                      | U50                            |
| 21              | 314-0040        | 1                          | IC 74LS125                     | U10                            |
| 22              | 314-0056        | 1                          | IC 74LS132                     | U21                            |
| 23              | 314-0104        | 2                          | IC 74LS138                     | U55, 56                        |
| 24              | 314-0087        | 1                          | IC 74LS139                     | U39                            |
| 25              | 314-0076        | 7                          | IC 74LS157                     | U60, 61, 69,<br>70, 77, 78, 79 |
| 26              | 314-0127        | 2                          | IC 74LS164                     | U22, 23                        |
| 27              | 314-0072        | 2                          | IC 74LS174                     | U66, 67                        |

## CONTROL BOARD ASSEMBLY

DRAWING NUMBER 834-5166

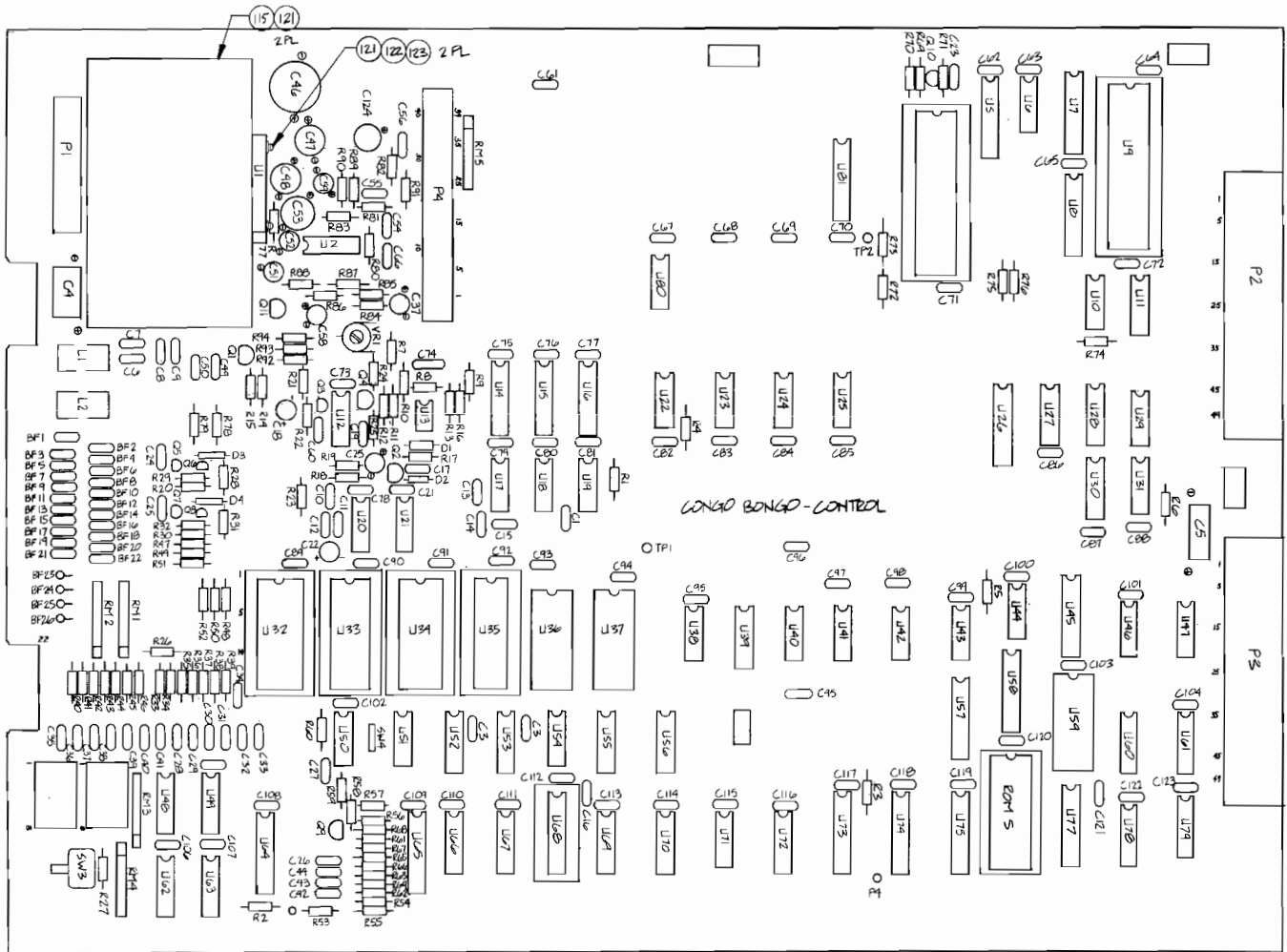
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>            | <u>REF NO.</u>             |
|-----------------|-----------------|----------------------------|-------------------------------|----------------------------|
| 28              | 314-0073        | 6                          | IC 74LS175                    | U14, 15, 16,<br>27, 28, 30 |
| 29              | 314-0083        | 1                          | IC 74LS240                    | U64                        |
| 30              | 314-0055        | 4                          | IC 74LS244                    | U5, 7, 26, 65              |
| 31              | 314-0099        | 1                          | IC 74LS245                    | U45                        |
| 32              | 314-0143        | 2                          | IC 74LS259                    | U52, 53                    |
| 33              | 314-0122        | 2                          | IC 74LS299                    | U73, 75                    |
| 34              | 314-0272        | 4                          | IC 74LS353                    | U48, 49, 62,<br>63         |
| 35              | 314-0102        | 1                          | IC 74LS367                    | U11                        |
| 36              | 314-0131        | 1                          | IC 74LS373                    | U8                         |
| 37              | 314-0093        | 1                          | IC 74LS374                    | U81                        |
| 38              | 314-0119        | 4                          | IC 74LS377                    | U57, 58, 74,<br>77         |
| 39              | 313-0022        | 1                          | IC NE556                      | U12                        |
| 40              | 315-            | 3                          | IC HM6116P-4                  | U36, 37, 59                |
| 41              | 315-0146        | 1                          | IC MB3614                     | U2                         |
| 42              | 313-            | 1                          | IC MB3731                     | U1                         |
| 43              | 313-0110        | 1                          | IC MB3761                     | U13                        |
| 44              | 315-5019        | 1                          | IC Controller Chip<br>G501564 | U9                         |
| 45              | 213-0008        | 1                          | SKT 20 Pin                    |                            |
| 46              | 213-0012        | 5                          | SKT 28 Pin                    |                            |
| 47              | 213-0005        | 2                          | SKT 40 Pin                    |                            |
| 48              | 213-0001        | 3                          | SKT 24 Pin                    |                            |
| 49              | 212-0098        | 1                          | Conn M 10 Pin                 |                            |
| 50              | 212-0133        | 2                          | Conn M 50 Pin                 |                            |
| 51              | 212-5001        | 1                          | Conn M 40 Pin                 |                            |
| 52              | 211-0168        | 4                          | Conn Pin Test PT              |                            |
| 53              | 470-01R0        | 2                          | Res 1 Ohm 1/4W 5%             |                            |
| 54              | 470-0220        | 2                          | Res 22 Ohm 1/4W 5%            |                            |

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>         | <u>REF NO.</u> |
|-----------------|-----------------|----------------------------|----------------------------|----------------|
| 55              | 470-0680        | 3                          | Res 68 Ohm 1/4W 5%         |                |
| 56              | 470-0101        | 18                         | Res 100 Ohm 1/4W 5%        |                |
| 57              | 470-0221        | 7                          | Res 220 Ohm 1/4W 5%        |                |
| 58              | 470-0471        | 6                          | Res 470 Ohm 1/4W 5%        |                |
| 59              | 470-0102        | 15                         | Res 1K Ohm 1/4W 5%         |                |
| 60              | 470-0122        | 2                          | Res 1.2K Ohm 1/4W 5%       |                |
| 61              | 470-0222        | 1                          | Res 2.2K Ohm 1/4W 5%       |                |
| 62              | 470-0472        | 11                         | Res 4.7K Ohm 1/4W 5%       |                |
| 63              | 470-0562        | 1                          | Res 5.6K Ohm 1/4W 5%       |                |
| 64              | 470-0103        | 11                         | Res 10K Ohm 1/4W 5%        |                |
| 65              | 470-0203        | 3                          | Res 20K Ohm 1/4W 5%        |                |
| 66              | 470-0473        | 2                          | Res 47K Ohm 1/4W 5%        |                |
| 67              | 470-0513        | 1                          | Res 51K Ohm 1/4W 5%        |                |
| 68              | 470-0104        | 3                          | Res 100K Ohm 1/4W 5%       |                |
| 69              | 470-0124        | 1                          | Res 120K Ohm 1/4W 5%       |                |
| 70              | 470-0154        | 1                          | Res 150K Ohm 1/4W 5%       |                |
| 71              | 470-0224        | 1                          | Res 220K Ohm 1/4W 5%       |                |
| 72              | 470-0334        | 1                          | Res 330K Ohm 1/4W 5%       |                |
| 73              | 470-0105        | 2                          | Res 1M Ohm 1/4W 5%         |                |
| 74              | 220-0218        | 1                          | Vol Cont 20K Ohm           |                |
| 75              | 477-0005        | 3                          | Res Pack 8 x 4.7K Ohm 1/8W |                |
| 76              | 477-0006        | 2                          | Res Pack 8 x 1K Ohm 1/8W   |                |
| 77              | 481-0213        | 2                          | Diode IS2075               |                |
| 78              | 482-0037        | 4                          | XSTR 2SA564                |                |
| 79              | 482-0057        | 2                          | XSTR 2SC1384               |                |
| 80              | 482-0240        | 5                          | XSTR 2SC1684               |                |
| 81              | 509-0156        | 1                          | SW 1 Pos. Dip SPST         |                |
| 82              | 510-0049        | 2                          | SW 8 Pos. Dip SPST         |                |
| 83              | 510-0053        | 1                          | SW Push Button             |                |
| 84              | 150-0160        | 1                          | Cap E470 MF 16 WV          |                |
| 85              | 150-0023        | 8                          | Cap E10 MF 16 WV           |                |

## CONTROL BOARD ASSEMBLY

DRAWING NUMBER 834-5166

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>      | <u>REF NO.</u> |
|-----------------|-----------------|----------------------------|-------------------------|----------------|
| 86              | 150-0059        | 2                          | Cap E100 MF 16 WV       |                |
| 87              | 150-0159        | 1                          | Cap E220 MF 16 WV       |                |
| 88              | 150-0031        | 2                          | Cap E470 MF 16 WV       |                |
| 89              | 150-0168        | 1                          | Cap E1000 MF 16 WV      |                |
| 90              | 151-0020        | 2                          | Cap CER 33 PF 50V       |                |
| 91              | 151-0002        | 3                          | Cap CER 100 PF 50V      |                |
| 92              | 151-0043        | 7                          | Cap CER 220 PF 50V      |                |
| 93              | 151-0074        | 2                          | Cap CER 0.0022 MF 25V   |                |
| 94              | 151-0011        | 4                          | Cap CER 0.01 MF 50V     |                |
| 95              | 151-0041        | 87*                        | Cap CER 0.1 MF 25V      |                |
| 96              | 152-0063        | 1                          | Cap Film 0.0015 MF 50V  |                |
| 97              | 152-0026        | 1                          | Cap Film 0.0039 MF 100V |                |
| 98              | 152-0031        | 2                          | Cap Film 0.1 MF 50V     |                |
| 99              | 180-5002        | 2                          | Coil ST-501571          |                |
| 100             | 601-5022        | 22                         | Filter 253D-01          |                |
| 101             | 601-5023        | 4                          | Filter 2535-01          |                |



## CONTROL BOARD 2 ASSEMBLY

DRAWING NUMBER 834-5212

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>  | <u>REF. DES.</u>                |
|-----------------|-----------------|------------------|---------------------|---------------------------------|
| 2               | 530-5004        | 1                | Heat Sink 6.2°C/W   |                                 |
| 3               | 421-5262        | 1                | Decal 834-5212      |                                 |
| 4               | 316-5334        | 1                | IC 2764 EPR-5334    | U21                             |
| 5               | 316-5335        | 1                | IC 2764 EPR-5335    | U22                             |
| 6               | 316-5336        | 1                | IC 2764 EPR-5336    | U23                             |
| 7               | 316-5337        | 1                | IC 2764 EPR-5337    | U24                             |
| 8               | 316-5295        | 1                | IC 2764 EPR-5295    | U77                             |
| 9               | 316-5307        | 1                | IC 2764 EPR-5307    | U19                             |
| 10              | 316-5315        | 1                | IC TBP28L22 PR-5315 | U87                             |
| 11              | 315-0041        | 2                | IC Z80A             | U18, 29.                        |
| 12              | 315-0152        | 1                | IC 8225A-5          | U97                             |
| 13              | 314-0078        | 2                | IC 74LS02           | U45, 68.                        |
| 14              | 314-0019        | 5                | IC 74LS04           | U33, 47, 53,<br>83, 95.         |
| 15              | 314-0015        | 1                | IC 7404             | U16                             |
| 16              | 314-0058        | 1                | IC 74LS08           | U93                             |
| 17              | 314-0059        | 1                | IC 74LS10           | U56                             |
| 18              | 314-0146        | 1                | IC 7416             | U13                             |
| 19              | 314-0060        | 1                | IC 74LS20           | U94                             |
| 20              | 314-0066        | 1                | IC 74LS27           | U69                             |
| 21              | 314-0067        | 1                | IC 74LS30           | U93                             |
| 22              | 314-0068        | 4                | IC 74LS32           | U39, 42, 43, 90.                |
| 23              | 314-0062        | 4                | IC 74LS74           | U46, 48, 71, 92.                |
| 24              | 314-0070        | 1                | IC 74LS86           | U84                             |
| 25              | 314-0040        | 1                | IC 74LS125          | U31                             |
| 26              | 314-0056        | 1                | IC 74LS132          | U81                             |
| 27              | 314-0104        | 3                | IC 74LS138          | U17, 34, 44.                    |
| 28              | 314-0087        | 1                | IC 74LS139          | U38                             |
| 29              | 314-0076        | 7                | IC 74LS157          | U62, 63, 64,<br>66, 88, 89, 96. |
| 30              | 314-0127        | 2                | IC 74LS164          | U91, 92.                        |
| 31              | 314-0072        | 2                | IC 74LS174          | U85, 86.                        |
| 32              | 314-0073        | 6                | IC 74LS175          | U35, 36, 40,<br>54, 55, 70.     |
| 33              | 314-0083        | 1                | IC 74LS240          | U57                             |

## CONTROL BOARD 2 ASSEMBLY

DRAWING NUMBER 834-5212

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>                   | <u>REF DES.</u>  |
|-----------------|-----------------|------------------|--------------------------------------|------------------|
| 34              | 314-0055        | 4                | IC 74LS244                           | U27, 28, 37, 82. |
| 35              | 314-0099        | 1                | IC 74LS245                           | U60              |
| 36              | 314-0143        | 2                | IC 74LS259                           | U58, 59          |
| 37              | 314-0122        | 2                | IC 74LS299                           | U78, 80          |
| 38              | 314-0272        | 4                | IC 74LS353                           | U51, 52, 66, 67  |
| 39              | 314-0102        | 1                | IC 74LS367                           | U41              |
| 40              | 314-0131        | 1                | IC 74LS373                           | U32              |
| 41              | 314-0093        | 1                | IC 74LS374                           | U98              |
| 42              | 314-0119        | 4                | IC 74LS377                           | U74, 75, 76, 79  |
| 43              | 314-0075        | 2                | IC 74LS393                           | U14, 15          |
| 44              | 313-0022        | 1                | IC NE556                             | U49              |
| 45              | 313-0139        | 1                | IC MB3731                            | U50              |
| 46              | 313-0110        | 1                | IC MB3761                            | U50              |
| 47              | 313-0140        | 1                | IC AN78N06                           | U3               |
| 48              | 315-0217        | 4                | IC HM6116P-4                         | U20, 25, 26, 61  |
| 49              | 315-0146        | 4                | IC MB3614MG                          | U2, 5, 6, 7      |
| 50              | 315-0034        | 1                | IC CD4001                            | U11              |
| 51              | 315-0205        | 2                | IC 76489A                            | U8, 9            |
| 52              | 315-0221        | 1                | IC MC14538B                          | U12              |
| 53              | 315-0035        | 1                | IC MM5837                            | U10              |
| 54              | 315-5019        | 1                | IC Cont. Chip G501564                | U30              |
| 55              | 315-5021        | 1                | IC Cont. Chip ST-501534              | U4               |
| 56              | 213-0008        | 1                | Socket 20-pin                        |                  |
| 57              | 213-0012        | 6                | Socket 28-pin                        |                  |
| 58              | 213-0005        | 1                | Socket 40-pin                        |                  |
| 59              | 212-0098        | 1                | Conn. Male 10-pin                    |                  |
| 60              | 212-0133        | 2                | Conn. Male 50-pin                    |                  |
| 61              | 211-0168        | 4                | Conn. Pin Test Point                 |                  |
| 62              | 470-01R0        | 2                | Resistor, 1 ohm $\frac{1}{4}$ W 5%   |                  |
| 63              | 470-0100        | 2                | Resistor, 10 ohm $\frac{1}{4}$ W 5%  |                  |
| 64              | 470-0220        | 3                | Resistor, 22 ohm $\frac{1}{4}$ W 5%  |                  |
| 65              | 470-0680        | 3                | Resistor, 68 ohm $\frac{1}{4}$ W 5%  |                  |
| 66              | 470-0221        | 9                | Resistor, 220 ohm $\frac{1}{4}$ W 5% |                  |
| 67              | 470-0331        | 1                | Resistor, 330 ohm $\frac{1}{4}$ W 5% |                  |
| 68              | 470-0471        | 7                | Resistor, 470 ohm $\frac{1}{4}$ W 5% |                  |

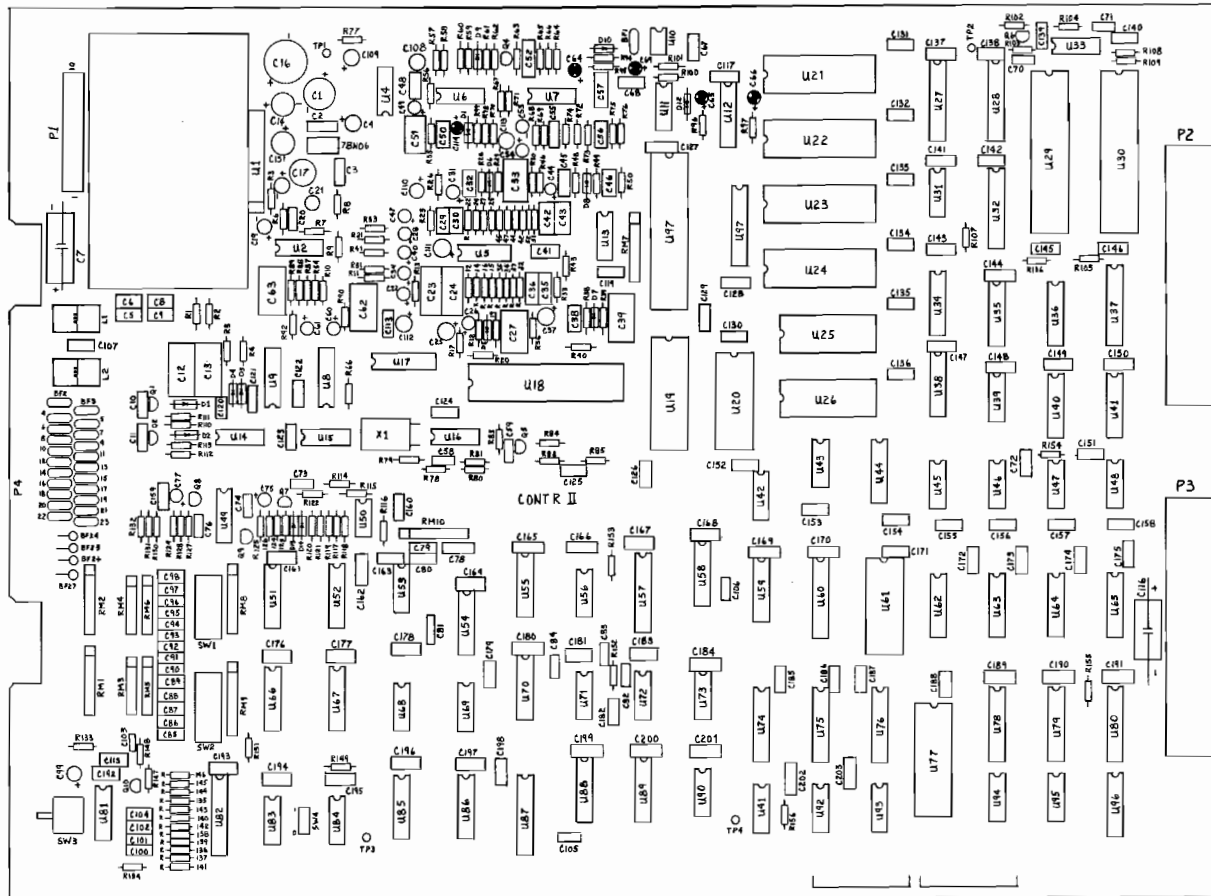
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>                  |
|-----------------|-----------------|------------------|-------------------------------------|
| 69              | 470-0102        | 19               | Resistor, 1K ohm $\frac{1}{4}$ W 5% |
| 70              | 470-0122        | 5                | Resistor, 1.2K $\frac{1}{4}$ W 5%   |
| 71              | 470-0202        | 2                | Resistor, 2K $\frac{1}{4}$ W 5%     |
| 72              | 470-0222        | 1                | Resistor, 2.2K $\frac{1}{4}$ W 5%   |
| 73              | 470-0332        | 1                | Resistor, 3.3K $\frac{1}{4}$ W 5%   |
| 74              | 470-0472        | 11               | Resistor, 4.7K $\frac{1}{4}$ W 5%   |
| 75              | 470-0562        | 1                | Resistor, 5.6K $\frac{1}{4}$ W 5%   |
| 76              | 470-0103        | 16               | Resistor, 10K $\frac{1}{4}$ W 5%    |
| 77              | 470-0153        | 2                | Resistor, 15K $\frac{1}{4}$ W 5%    |
| 78              | 470-0203        | 11               | Resistor, 20K $\frac{1}{4}$ W 5%    |
| 79              | 470-0223        | 10               | Resistor, 22K $\frac{1}{4}$ W 5%    |
| 80              | 470-0473        | 12               | Resistor, 47K $\frac{1}{4}$ W 5%    |
| 81              | 470-0513        | 9                | Resistor, 51K $\frac{1}{4}$ W 5%    |
| 82              | 470-0104        | 8                | Resistor, 100K $\frac{1}{4}$ W 5%   |
| 83              | 470-0124        | 1                | Resistor, 120K $\frac{1}{4}$ W 5%   |
| 84              | 470-0154        | 2                | Resistor, 150K $\frac{1}{4}$ W 5%   |
| 85              | 470-0204        | 1                | Resistor, 200K $\frac{1}{4}$ W 5%   |
| 86              | 470-0224        | 1                | Resistor, 220K $\frac{1}{4}$ W 5%   |
| 87              | 470-0244        | 1                | Resistor, 240K $\frac{1}{4}$ W 5%   |
| 88              | 470-0334        | 2                | Resistor, 330K $\frac{1}{4}$ W 5%   |
| 89              | 470-0394        | 2                | Resistor, 390K $\frac{1}{4}$ W 5%   |
| 90              | 470-0474        | 2                | Resistor, 470K $\frac{1}{4}$ W 5%   |
| 91              | 470-0105        | 4                | Resistor, 1M $\frac{1}{4}$ W 5%     |
| 92              | 470-0225        | 2                | Resistor, 2.2M $\frac{1}{4}$ W 5%   |
| 93              | 150-0233        | 2                | Capacitor, E. 1mf 50V NP            |
| 94              | 150-0009        | 9                | Capacitor, E. 1mf 50V U-type        |
| 95              | 150-0023        | 6                | Capacitor, E. 10mf 16V U-type       |
| 96              | 150-0065        | 10               | Capacitor, E. 47mf 16V U-type       |
| 97              | 150-0059        | 2                | Capacitor, E. 100mf 16V U-type      |
| 98              | 150-0159        | 1                | Capacitor, E. 220mf 16V U-type      |
| 99              | 150-0160        | 1                | Capacitor, E. 1470mf 16V U-type     |
| 100             | 150-0168        | 1                | Capacitor, E. 1000mf 16V            |
| 101             | 151-0020        | 3                | Capacitor, Cer. 33pf 50V            |
| 102             | 151-0002        | 3                | Capacitor, Cer. 100pf 50V           |
| 103             | 151-0043        | 10               | Capacitor, Cer. 220pf 50V           |
| 104             | 151-0042        | 1                | Capacitor, Cer. 470pf 50V           |



## CONTROL BOARD 2 ASSEMBLY

DRAWING NUMBER 834-5212

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY REQD.</u> | <u>DESCRIPTION</u>                         |
|-----------------|-----------------|------------------|--|
| 105             | 151-0005        | 1                | Capacitor, Cer. 680pf 50V                  |
| 106             | 151-0074        | 3                | Capacitor, Cer. 0.0022mf 25V               |
| 107             | 151-0011        | 94               | Capacitor, Cer. 0.01mf 50V                 |
| 108             | 151-0056        | 21               | Capacitor, Cer. 0.047mf 50V                |
| 109             | 151-0041        | 2                | Capacitor, Cer. 0.1mf 25V                  |
| 110             | 152-0063        | 1                | Capacitor, Film, 0.0015mf 50V              |
| 111             | 152-0051        | 1                | Capacitor, Film, 0.0033mf 50V              |
| 112             | 152-0026        | 1                | Capacitor, Film, 0.0039mf 100V             |
| 113             | 152-0036        | 2                | Capacitor, Film, 0.0068mf 50V              |
| 114             | 152-0033        | 1                | Capacitor, Film, 0.01mf 50V                |
| 115             | 152-0079        | 2                | Capacitor, Film, 0.022mf 50V               |
| 116             | 152-0035        | 6                | Capacitor, Film, 0.033mf 50V               |
| 117             | 152-0038        | 2                | Capacitor, Film, 0.047mf 50V               |
| 118             | 152-0066        | 3                | Capacitor, Film, 0.068mf 25V               |
| 119             | 152-0031        | 6                | Capacitor, Film, 0.1mf 50V                 |
| 120             | 153-0070        | 4                | Capacitor, Tant. 1mf 16V                   |
| 121             | 153-0058        | 1                | Capacitor, Tant. 2.2mf 16V                 |
| 122             | 153-0050        | 1                | Capacitor, Tant. 33mf 16V                  |
| 123             | 150-0031        | 2                | Capacitor, E. 470mf 16V T-type             |
| 124             | 220-0218        | 1                | Volume Control, 20K                        |
| 125             | 477-0005        | 3                | Resistor Pack, 8 X 4.7K 1/8W w/c           |
| 126             | 477-0039        | 2                | Resistor Pack, 8 X 1K 1/8W w/c             |
| 127             | 477-0047        | 5                | Resistor Pack, 4 X 100 ohm $\frac{1}{4}$ W |
| 128             | 481-0213        | 12               | Diode, IS2075                              |
| 129             | 482-0037        | 5                | Transistor 2SA564Q                         |
| 130             | 482-0057        | 2                | Transistor 2SC1384R                        |
| 131             | 482-0240        | 3                | Transistor 2SC1684                         |
| 132             | 509-0156        | 1                | DIP Switch 1 Position                      |
| 133             | 510-0049        | 2                | DIP Switch 8 Position                      |
| 134             | 510-0053        | 1                | Push Button Switch                         |
| 135             | 180-5002        | 2                | Coil ST-501571                             |
| 136             | 270-5001        | 23               | Filter 253D-01                             |
| 137             | 270-5002        | 4                | Filter 2535-01                             |
| 138             |                 | 2                | Screw, M3 X 10 R.H.PHIL w/F.& S.Washer     |
| 139             |                 | 2                | Screw, M3 X 6 P.H.PHIL w/F.Washer          |



## VIDEO BOARD ASSEMBLY

DRAWING NUMBER 834-5167

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u> | <u>REF NO.</u>             |
|-----------------|-----------------|----------------------------|--------------------|----------------------------|
| 1               | 171-5026        | 1                          | PC Board           |                            |
| 2               | 316-5296        | 1                          | IC 2764 EPR-5296   | U57 (ROM 6)                |
| 3               | 316-5297        | 1                          | IC 2764 EPR-5297   | U58 (ROM 7)                |
| 4               | 316-5298        | 1                          | IC 2764 EPR-5298   | U93 (ROM 8)                |
| 5               | 316-5299        | 1                          | IC 2764 EPR-5299   | U94 (ROM 9)                |
| 6               | 316-5300        | 1                          | IC 2764 EPR-5300   | U95 (ROM 10)               |
| 7               | 316-5301        | 1                          | IC 2764 EPR-5301   | U77 (ROM 11)               |
| 8               | 316-5302        | 1                          | IC 2764 EPR-5302   | U78 (ROM 12)               |
| 9               | 316-5303        | 1                          | IC 2764 EPR-5303   | U79 (ROM 13)               |
| 10              | 316-5304        | 1                          | IC 2764 EPR-5304   | U104 (ROM 14)              |
| 11              | 316-5305        | 1                          | IC 2764 EPR-5305   | U105 (ROM 15)              |
| 12              | 316-5306        | 1                          | IC 2764 EPR-5306   | U106 (ROM 16)              |
| 13              | 315-0065        | 1                          | IC 93419           | U53                        |
| 14              | 315-0219        | 2                          | IC AM9122-25 DC    | U117, 118                  |
| 15              | 315-0220        | 1                          | IC MB8128-10       | U12                        |
| 16              | 314-0018        | 3                          | IC 74LS00          | U8, 16, 92                 |
| 17              | 314-0281        | 1                          | IC 74S00           | U48                        |
| 18              | 314-0019        | 6                          | IC 74LS04          | U17, 31, 37,<br>43, 54, 88 |
| 19              | 314-0046        | 1                          | IC 74S04           | U45                        |
| 20              | 314-0058        | 1                          | IC 74LS08          | U100                       |
| 21              | 314-0060        | 4                          | IC 74LS20          | U9, 19, 32, 62             |
| 22              | 314-0066        | 1                          | IC 74LS27          | U61                        |
| 23              | 314-0067        | 1                          | IC 74LS30          | U35                        |
| 24              | 314-0068        | 2                          | IC 74LS32          | U28, 56                    |
| 25              | 314-0273        | 1                          | IC 74S32           | U97                        |
| 26              | 314-0140        | 1                          | IC 74S74           | U115                       |
| 27              | 314-0062        | 4                          | IC 74LS74          | U1, 7, 20, 52              |
| 28              | 314-0070        | 6                          | IC 74LS86          | U4, 5, 38,<br>55, 64, 65   |
| 29              | 314-0274        | 2                          | IC 74S86           | U98, 116                   |

## VIDEO BOARD ASSEMBLY

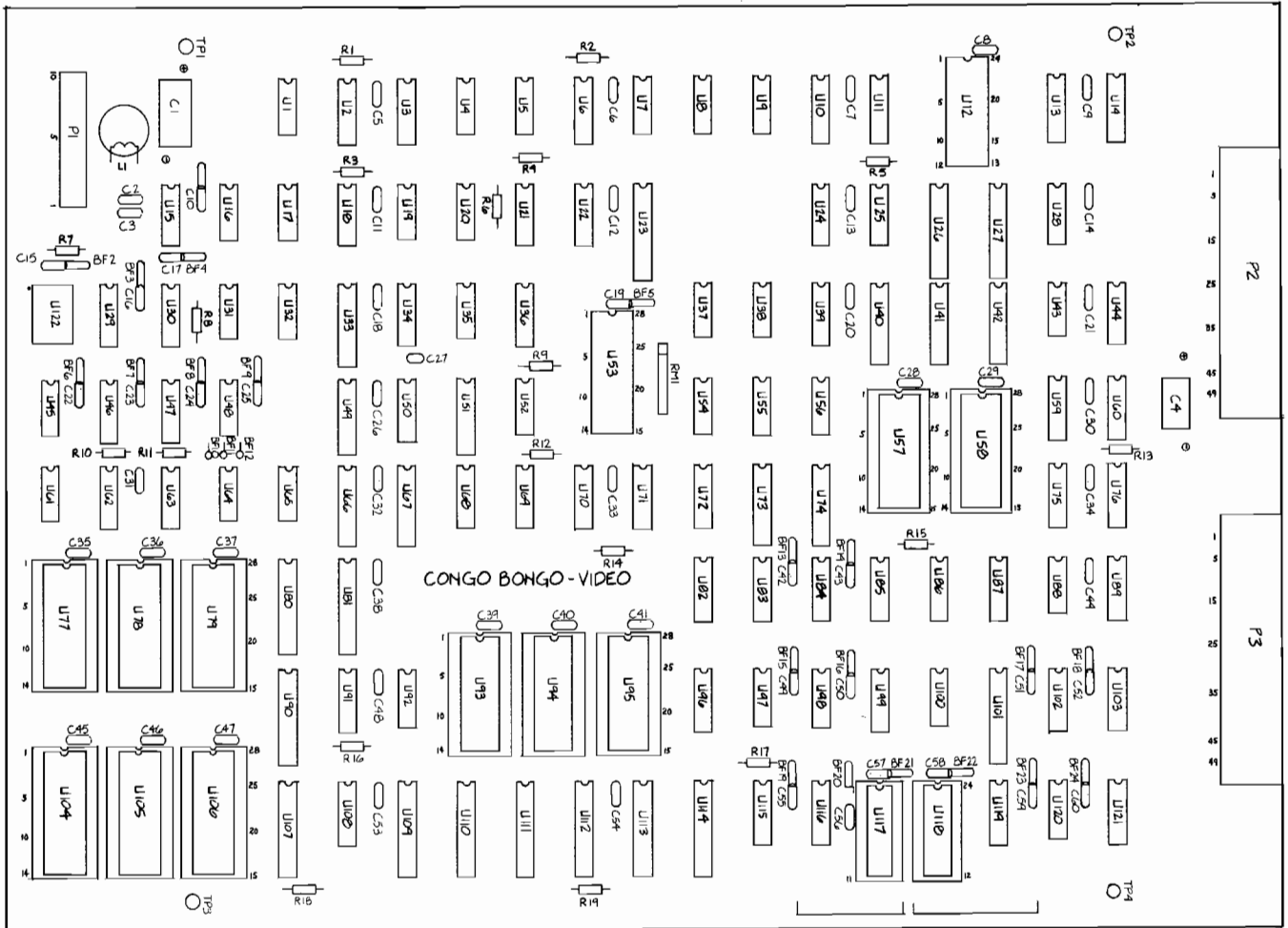
DRAWING NUMBER 834-5167

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>            | <u>REF NO.</u>   |
|-----------------|-----------------|----------------------------|-------------------------------|--|
| 30              | 314-0237        | 1                          | IC 74LS109                    | U63  |
| 31              | 314-0151        | 2                          | IC 74S112                     | U46, 47  |
| 32              | 314-0104        | 1                          | IC 74LS138                    | U34  |
| 33              | 314-0087        | 1                          | IC 74LS139                    | U39  |
| 34              | 314-0076        | 10                         | IC 74LS157                    | U13, 14, 22, 36,<br>82, 91, 96, 103,<br>108, 121                     |
| 35              | 314-0269        | 2                          | IC 74S157                     | U102, 119  |
| 36              | 314-0097        | 5                          | IC 74LS161                    | U2, 3, 6, 18, 21   |
| 37              | 314-0139        | 5                          | IC 74S163                     | U15, 29, 30, 83,<br>84   |
| 38              | 314-0072        | 1                          | IC 74LS174                    | U72  |
| 39              | 314-0055        | 1                          | IC 74LS244                    | U33  |
| 40              | 314-0099        | 1                          | IC 74LS245                    | U27  |
| 41              | 314-0276        | 1                          | IC 74S260                     | U120   |
| 42              | 314-0101        | 15                         | IC 74LS283                    | U10, 11, 24, 25,<br>44, 59, 60, 68,<br>69, 70, 71, 85,<br>86, 87, 99 |
| 43              | 314-0122        | 6                          | IC 74LS299                    | U80, 90, 107,<br>109, 112, 114                                       |
| 44              | 314-0102        | 3                          | IC 74LS367                    | U75, 76, 89  |
| 45              | 314-0103        | 1                          | IC 74LS368                    | U50  |
| 46              | 314-0275        | 4                          | IC 74LS373                    | U41, 110, 111,<br>113  |
| 47              | 314-0275        | 1                          | IC 74S373                     | U101   |
| 48              | 314-0093        | 8                          | IC 74LS374                    | U23, 26, 42, 51,<br>66, 67, 74, 81                                   |
| 49              | 314-0119        | 3                          | IC 74LS377                    | U40, 49, 73  |
| 50              | 315-5020        | 1                          | IC Controller Chip<br>G501533 | U122   |

## VIDEO BOARD ASSEMBLY

DRAWING NUMBER 834-5167

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>              | <u>REF NO.</u> |
|-----------------|-----------------|----------------------------|---------------------------------|----------------|
| 51              |                 |                            |                                 |                |
| 52              | 213-0011        | 2                          | SKT 22 Pin                      |                |
| 53              | 213-0012        | 11                         | SKT 28 Pin                      |                |
| 54              | 212-0098        | 1                          | Conn M 10 Pin                   |                |
| 55              | 212-0133        | 2                          | Conn M 50 Pin                   |                |
| 56              | 211-0168        | 4                          | Conn Pin Test PT                |                |
| 57              | 470-0102        | 19                         | Res 1K Ohm 1/4W 5%              |                |
| 58              | 477-0039        | 1                          | Res Pack 8 x 1K Ohm<br>1/8W W/C |                |
| 59              | 150-0031        | 2                          | Cap E 470 MF 16V                |                |
| 60              | 151-0043        | 1                          | Cap CER 220 PF 50V              |                |
| 61              | 151-0074        | 1                          | Cap CER 0.0022 MF 25V           |                |
| 62              | 151-0041        | 56*                        | Cap CER 0.1 MF 25V              |                |
| 63              | 180-5002        | 1                          | Coil ST-501571                  |                |
| 64              | 601-5022        | 21                         | Filter 253D-01                  |                |
| 65              | 601-5023        | 3                          | Filter 253S-01                  |                |



## SOUND BOARD ASSEMBLY

DRAWING NUMBER 834-5168

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>              | <u>REF NO.</u> |
|-----------------|-----------------|----------------------------|---------------------------------|----------------|
| 1               | 171-5027        | 1                          | PC Board                        |                |
| 2               | 315-0041        | 1                          | IC Z80A                         | U3             |
| 3               | 315-0152        | 1                          | IC 8255A-5                      | U1             |
| 4               | 314-0015        | 1                          | IC 7404                         | U2             |
| 5               | 314-0146        | 1                          | IC 7416                         | U6             |
| 6               | 314-0104        | 1                          | IC 74LS138                      | U9             |
| 7               | 314-0075        | 2                          | IC 74LS393                      | U7, 8          |
| 8               | 315-0205        | 2                          | IC 76489                        | U4, 5          |
| 9               | 315-0146        | 4                          | IC MB3614                       | U12, 13, 16,17 |
| 10              | 315-0217        | 1                          | IC HM6116P-4                    | U10            |
| 11              | 315-0034        | 1                          | IC CD4001                       | U18            |
| 12              | 315-0228        | 1                          | IC $\mu$ PD4538 BC              | U19            |
| 13              | 315-0035        | 1                          | IC MM5837                       | U20            |
| 14              | 313-0140        | 1                          | IC AN78N06                      | U14            |
| 15              | 315-5021        | 1                          | IC Controller Chip<br>ST-501534 | U15            |
| 16              | 316-5307        | 1                          | IC 2764 EPR-5307                | U11            |
| 17              | 213-0012        | 1                          | Skt 28 Pin                      |                |
| 18              | 230-0039        | 1                          | X-TAL 4.00 MHz                  |                |
| 19              | 481-0213        | 8                          | Diode IS2075                    |                |
| 20              | 482-0037        | 1                          | XSTR 2SA564                     |                |
| 21              | 482-0240        | 1                          | XSTR 2SC 1684                   |                |
| 22              | 212-0164        | 1                          | Conn M40 Pin                    |                |
| 23              | 211-0168        | 3                          | Conn Pin Test PT                |                |
| 24              | 477-0005        | 2                          | Res Pack 8 x 4.7K<br>Ohm 1/8W   |                |
| 25              | 470-0100        | 2                          | Res 10 Ohm 1/4 5%               |                |
| 26              | 470-0220        | 1                          | Res 22 Ohm 1/4 5%               |                |
| 27              | 470-0221        | 2                          | Res 220 Ohm 1/4 5%              |                |
| 28              | 470-0331        | 1                          | Res 330 Ohm 1/4 5%              |                |
| 29              | 470-0102        | 7                          | Res 1K Ohm 1/4 5%               |                |

## SOUND BOARD ASSEMBLY

DRAWING NUMBER 834-5168

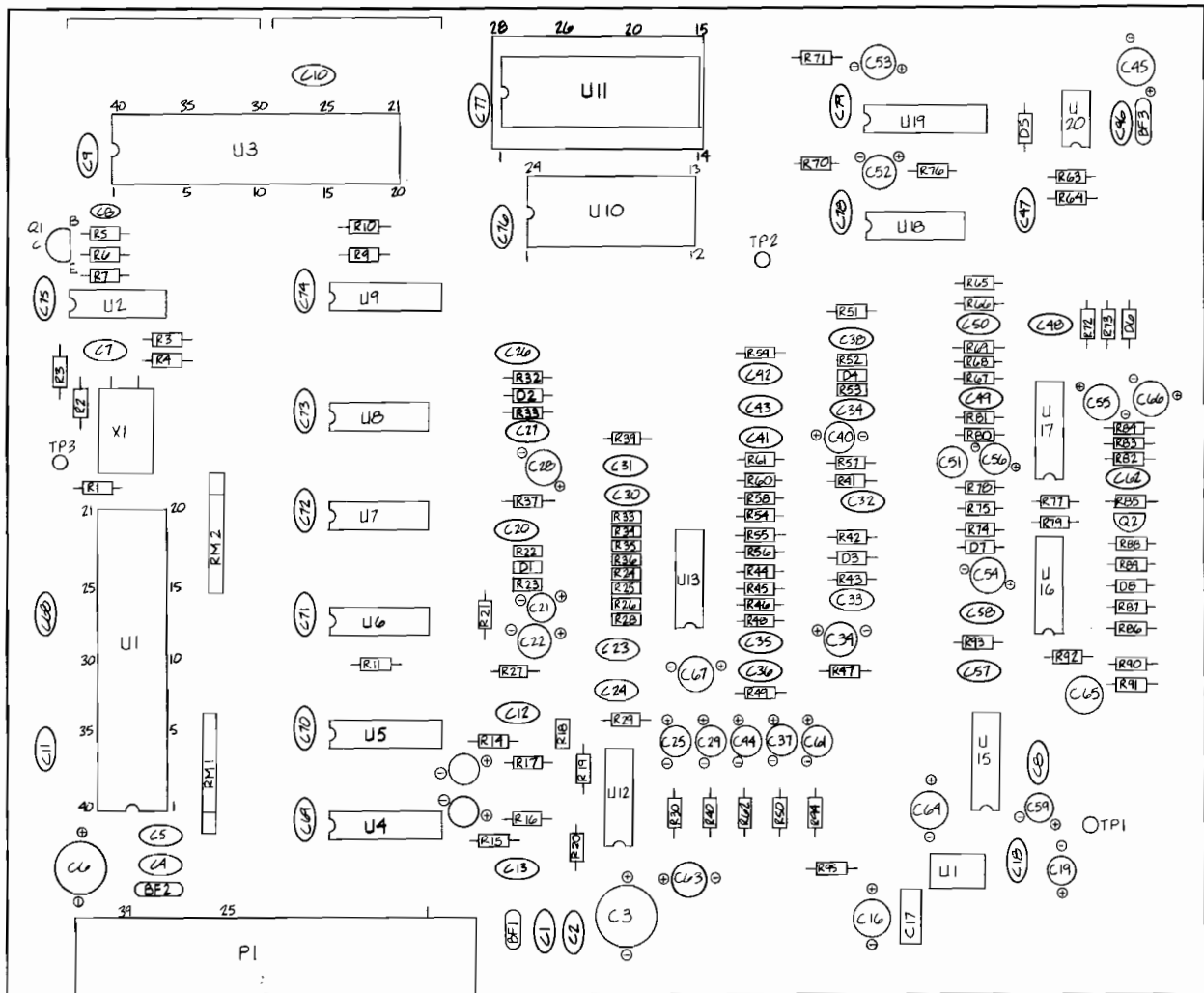
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>  | <u>REF NO.</u> |
|-----------------|-----------------|----------------------------|---------------------|----------------|
| 30              | 470-0122        | 3                          | Res 1.2K Ohm 1/4 5% |                |
| 31              | 470-0202        | 2                          | Res 2K Ohm 1/4 5%   |                |
| 32              | 470-0222        | 1                          | Res 2.2K Ohm 1/4 5% |                |
| 33              | 470-0332        | 1                          | Res 3.3K Ohm 1/4 5% |                |
| 34              | 470-0472        | 1                          | Res 4.7K Ohm 1/4 5% |                |
| 35              | 470-0103        | 13                         | Res 10K Ohm 1/4 5%  |                |
| 36              | 470-0153        | 2                          | Res 15K Ohm 1/4 5%  |                |
| 37              | 470-0203        | 8                          | Res 20K Ohm 1/4 5%  |                |
| 38              | 470-0223        | 10                         | Res 22K Ohm 1/4 5%  |                |
| 39              | 470-0473        | 12                         | Res 47K Ohm 1/4 5%  |                |
| 40              | 470-0513        | 8                          | Res 51K Ohm 1/4 5%  |                |
| 41              | 470-0104        | 5                          | Res 100K Ohm 1/4 5% |                |
| 42              | 470-0154        | 1                          | Res 150K Ohm 1/4 5% |                |
| 43              | 470-0204        | 1                          | Res 200K Ohm 1/4 5% |                |
| 44              | 470-0334        | 1                          | Res 330K Ohm 1/4 5% |                |
| 45              | 470-0394        | 2                          | Res 390K Ohm 1/4 5% |                |
| 46              | 470-0474        | 2                          | Res 470K Ohm 1/4 5% |                |
| 47              | 470-0105        | 3                          | Res 1M Ohm 1/4 5%   |                |
| 48              | 470-0225        | 2                          | Res 2.2M Ohm 1/4 5% |                |
| 49              | 470-0244        | 1                          | Res 240K Ohm 1/4 5% |                |
| 50              | 470-0471        | 1                          | Res 470 Ohm 1/4 5%  |                |
| 51              | 150-            | 2                          | Cap E IMF 50V NP    |                |
| 52              | 150-0009        | 8                          | Cap E 1 MF 50V      |                |
| 53              | 150-0023        | 2                          | Cap E 10 MF 16V     |                |
| 54              | 150-0065        | 10                         | Cap E 47 MF 16V     |                |
| 55              | 150-0159        | 2                          | Cap E 220 MF 16V    |                |
| 56              | 150-0160        | 1                          | Cap E 470 MF 16V    |                |
| 57              | 151-0020        | 1                          | Cap CER 33 PF 50V   |                |
| 58              | 151-0043        | 1                          | Cap CER 220 PF 50V  |                |
| 59              | 151-0042        | 1                          | Cap CER 470 PF 50V  |                |
| 60              | 151-0005        | 1                          | Cap CER 680 PF 50V  |                |



## SOUND BOARD ASSEMBLY

DRAWING NUMBER 834-5168

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY</u><br><u>REQ'D</u> | <u>DESCRIPTION</u>      | <u>REF NO.</u> |
|-----------------|-----------------|----------------------------|-------------------------|----------------|
| 61              | 151-0074        | 2                          | Cap CER 0.0022 MF 25V   |                |
| 62              | 151-0011        | 1                          | Cap CER 0.1 MF 50V      |                |
| 63              | 151-0041        | 20*                        | Cap CER 0.1 MF 25V      |                |
| 64              | 152-0063        | 1                          | Cap Film 0.0015 MF 50V  |                |
| 65              | 152-0051        | 1                          | Cap Film 0.0033 MF 50V  |                |
| 66              | 152-0026        | 1                          | Cap Film 0.0039 MF 100V |                |
| 67              | 152-0036        | 2                          | Cap Film 0.0068 MF 50V  |                |
| 68              | 152-0033        | 1                          | Cap Film 0.01 MF 50V    |                |
| 69              | 152-0079        | 2                          | Cap Film 0.022 MF 50V   |                |
| 70              | 152-0035        | 6                          | Cap Film 0.033 MF 50V   |                |
| 71              | 152-0038        | 2                          | Cap Film 0.047 MF 50V   |                |
| 72              | 152-0066        | 3                          | Cap Film 0.068 MF 25V   |                |
| 73              | 152-0031        | 4                          | Cap Film 0.1 MF 50V     |                |
| 74              | 153-0070        | 4                          | Cap Tant 1 MF 16V       |                |
| 75              | 153-0058        | 1                          | Cap Tant 2.2 MF 10V     |                |
| 76              | 153-0050        | 1                          | Cap Tant 33 MF 16V      |                |
| 77              | 601-5022        | 3                          | Filter 253D-01          |                |



## G-80 POWER SUPPLY ASSEMBLY

DRAWING NUMBER 800-0191

| ITEM NO. | PART NO.    | QTY. REQD. |     |     |     |     | DESCRIPTION                                    | REF DES. |
|----------|-------------|------------|-----|-----|-----|-----|--|----------|
|          |             | -00        | -01 | -02 | -03 | -04 |  |          |
| 1        | 530-0016-00 | 1          | 1   | 1   | 1   | 1   | Heat Sink G-80<br>Power Supply                 |          |
| 2        | 250-0460-00 | 1          | 1   | 1   | 1   | 1   | Chassis Support<br>G-80 Power Supply           |          |
| 3        | 250-0461-00 | 1          | 1   | 1   | 1   | 1   | Cover G-80 Power<br>Supply                     |          |
| 4        | 800-0170-00 | 1          | -   | -   | -   | -   | PCB Assy. G-80<br>Power Supply                 |          |
| 5        | 253-0206-00 | 6          | 6   | 6   | 6   | 6   | Support PCB<br>Threaded                        |          |
| 6        | 281-0032-06 | 8          | 8   | 8   | 8   | 8   | SCR. PNH PHIL<br>Third FRMG<br>6-32 x .375 LG. |          |
| 7        | 800-0170-01 | -          | 1   | -   | -   | -   | PCB, Assy. G-80<br>Power Supply                |          |
| 8        | 482-0104-00 | 1          | 1   | 1   | 1   | 1   | Power Transistor                               | Tip 141  |
| 9        | 313-0023-00 | 1          | -   | 1   | -   | 1   | NEG 5 Volt<br>Regulator                        | 320T5    |
| 10       | 313-0014-00 | 1          | 1   | 1   | 1   | 1   | POS 12 Volt<br>Regulator                       | 340T12   |
| 11       | 313-0015-00 | 1          | -   | 1   | -   | -   | NEG 12 Volt<br>Regulator                       | 320T12   |
| 12       | 482-0100-00 | 1          | -   | 1   | -   | -   | Power Transistor<br>(Audio AMP)                | Tip 125  |
| 13       | 482-0019-00 | 1          | -   | 1   | -   | -   | Power Transistor<br>(Audio AMP)                | Tip 120  |
| 14       | 800-0170-02 | -          | -   | 1   | -   | -   | PCB Assy. G-80<br>Power Supply                 |          |
| 15       | 800-0170-03 | -          | -   | -   | 1   | -   | PCB Assy. G-80<br>Power Supply                 |          |
| 16       | 420-0557-00 | 1          | 1   | 1   | 1   | 1   | Decal, Fuse                                    |          |

## G-80 POWER SUPPLY ASSEMBLY

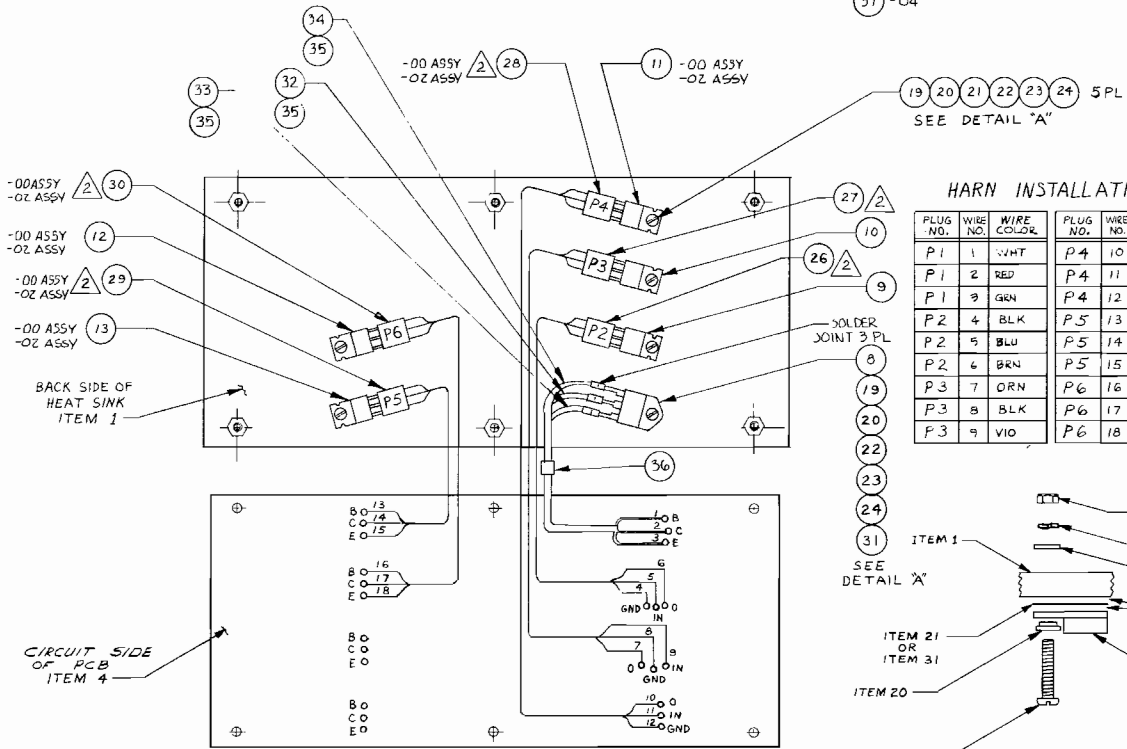
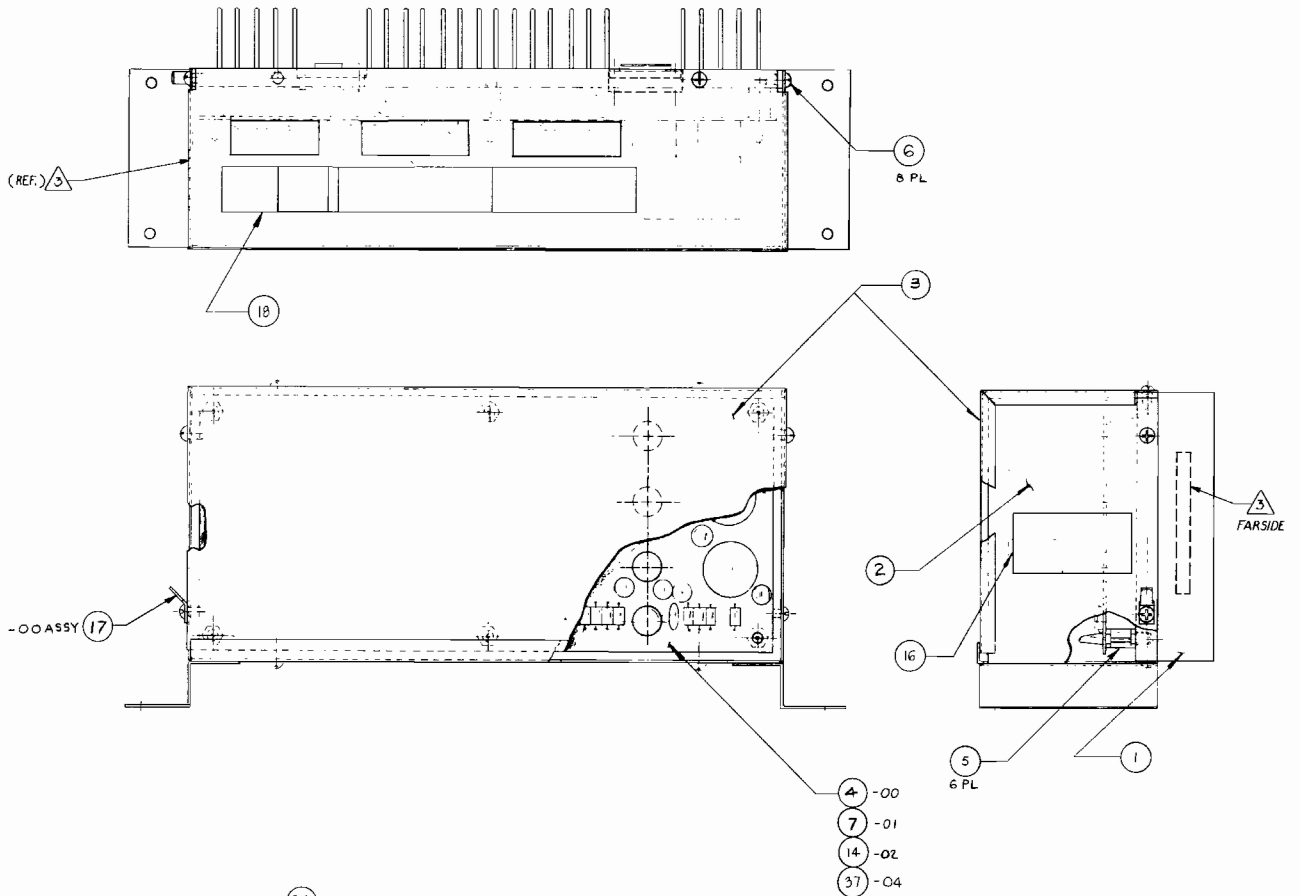
DRAWING NUMBER 800-0191

| ITEM NO. | PART NO.    | QTY. REQD. |      |      |      |      | DESCRIPTION                      | REF DES. |
|----------|-------------|------------|------|------|------|------|----------------------------------|----------|
|          |             | -00        | -01  | -02  | -03  | -04  |                                  |          |
| 17       | 280-0117-00 | 1          | -    | -    | -    | -    | Tab Rivet, Male<br>1/4"          |          |
| 18       | 420-0575-00 | 1          | 1    | 1    | 1    | 1    | Decal-Power<br>Supply B          |          |
| 19       | 281-0001-08 | 6          | 2    | 6    | 2    | 3    | SCR, PNH PHIL<br>#4-40 x .500 LG |          |
| 20       | 280-0341-00 | 6          | 2    | 6    | 2    | 3    | Washer Shoulder #4               |          |
| 21       | 310-0006-01 | 5          | 1    | 5    | 1    | 1    | INSL XSTR TO-220                 |          |
| 22       | 283-0060-13 | 6          | 2    | 6    | 2    | 3    | Washer Flat #4                   |          |
| 23       | 283-0061-02 | 6          | 2    | 6    | 2    | 3    | Washer Lock Split<br>#4          |          |
| 24       | 283-0072-07 | 6          | 2    | 6    | 2    | 3    | Nut HEX Mach<br>#4-40            |          |
| 25       |             |            |      |      |      |      |                                  |          |
| 26       | 800-0244-00 | 1          | -    | 1    | -    | 1    | Assy. Harn. XSTR<br>G-80 P2      |          |
| 27       | 800-0245-00 | 1          | 1    | 1    | 1    | 1    | Assy. Harn. XSTR<br>G-80 P3      |          |
| 28       | 800-0246-00 | 1          | -    | 1    | -    | -    | Assy. Harn. XSTR<br>G-80 P4      |          |
| 29       | 800-0247-00 | 1          | -    | 1    | -    | -    | Assy. Harn. XSTR<br>G-80 P5      |          |
| 30       | 800-0248-00 | 1          | -    | 1    | -    | -    | Assy. Harn. XSTR<br>G-80 P6      |          |
| 31       | 310-0007-01 | 1          | 1    | 1    | 1    | 1    | Ins1. XSTR "H"<br>(TO-218)       |          |
| 32       | 600-0092-42 | .38'       | .38' | .38' | .38' | .38' | Wire 22 AWG Red                  |          |
| 33       | 600-0092-45 | .38'       | .38' | .38' | .38' | .38' | Wire 22 AWG Green                |          |
| 34       | 600-0092-44 | .38'       | .38' | .38' | .38' | .38' | Wire 22 AWG White                |          |
| 35       | 310-0041-02 | .25'       | .25' | .25' | .25' | .25' | Shrink Tubing,<br>.125 I.D. CLR  |          |
| 36       | 280-0005-00 | 1          | 1    | 1    | 1    | 1    | Cable Tie Standard               |          |

G-80 POWER SUPPLY ASSEMBLY

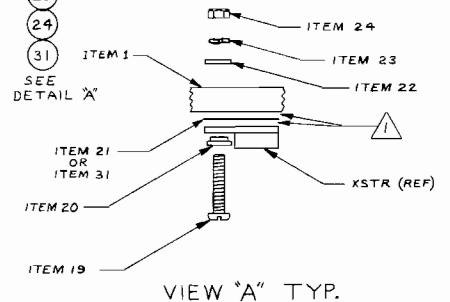
DRAWING NUMBER 800-0191

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY. REQD.</u> |     |     |     |     | <u>DESCRIPTION</u>            | <u>REF DES.</u> |
|-----------------|-----------------|-------------------|-----|-----|-----|-----|-------------------------------|-----------------|
|                 |                 | -00               | -01 | -02 | -03 | -04 |                               |                 |
| 37              | 800-0170-04     | -                 | -   | -   | -   | 1   | PC Assy. G-80<br>Power Supply |                 |
| 38              |                 |                   |     |     |     |     |                               |                 |
| 39              |                 |                   |     |     |     |     |                               |                 |
| 40              |                 |                   |     |     |     |     |                               |                 |
| 41              |                 |                   |     |     |     |     |                               |                 |
| 42              |                 |                   |     |     |     |     |                               |                 |
| 43              |                 |                   |     |     |     |     |                               |                 |
| 44              |                 |                   |     |     |     |     |                               |                 |
| 45              |                 |                   |     |     |     |     |                               |                 |
| 46              |                 |                   |     |     |     |     |                               |                 |
| 47              |                 |                   |     |     |     |     |                               |                 |
| 48              |                 |                   |     |     |     |     |                               |                 |
| 49              |                 |                   |     |     |     |     |                               |                 |
| 50              |                 |                   |     |     |     |     |                               |                 |



HARN INSTALLATION

| PLUG NO. | WIRE NO. | WIRE COLOR | PLUG NO. | WIRE NO. | WIRE COLOR |
|----------|----------|------------|----------|----------|------------|
| P1       | 1        | WHT        | P4       | 10       | WHT/RED    |
| P1       | 2        | RED        | P4       | 11       | WHT/GRN    |
| P1       | 3        | GRN        | P4       | 12       | BLK        |
| P2       | 4        | BLK        | P5       | 13       | GRN        |
| P2       | 5        | BLU        | P5       | 14       | RED        |
| P2       | 6        | BRN        | P5       | 15       | WHT        |
| P3       | 7        | ORN        | P6       | 16       | BRN        |
| P3       | 8        | BLK        | P6       | 17       | BLU        |
| P3       | 9        | VIO        | P6       | 18       | YEL        |



## G-80 POWER SUPPLY P.C. ASSEMBLY

DRAWING NUMBER 800-0170

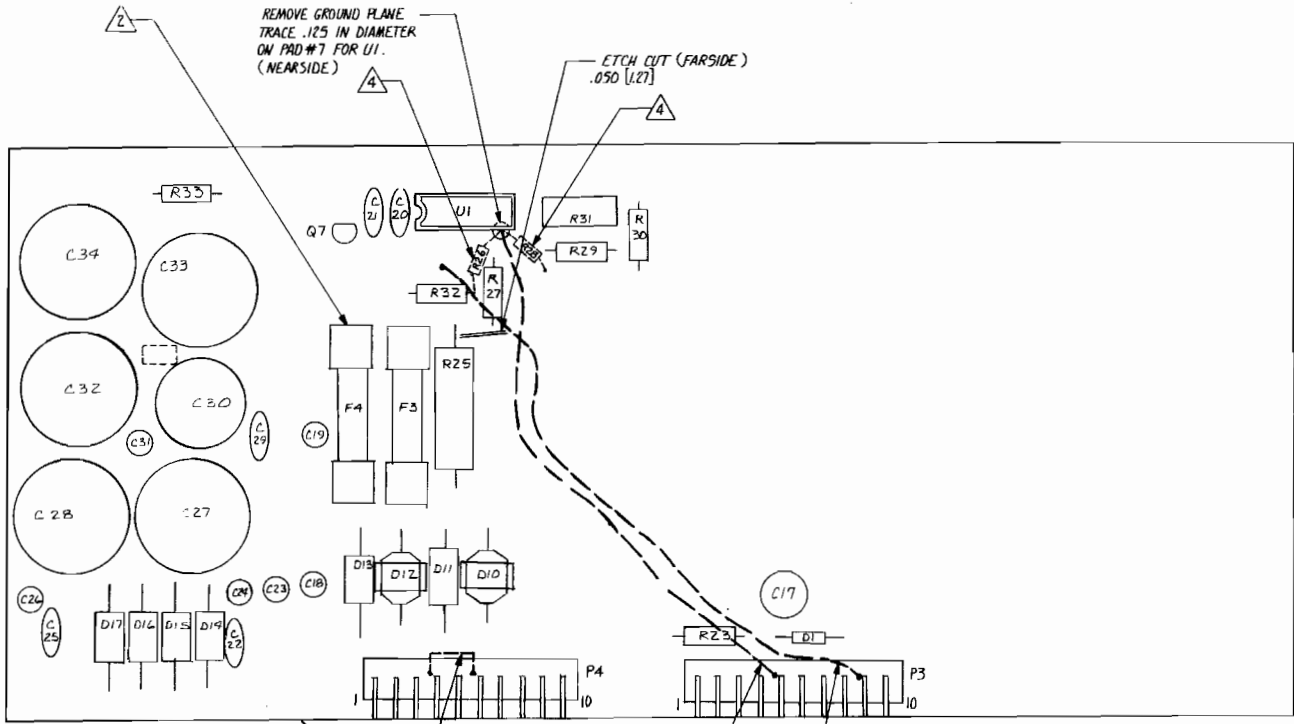
| ITEM NO. | PART NO. | QTY. REQD. |     |     |     |     | DESCRIPTION               | REF DES.                                  |
|----------|----------|------------|-----|-----|-----|-----|---------------------------|---|
|          |          | -0C        | -01 | -02 | -03 | -04 |                           |   |
| 1        | 150-0088 | 9          | 9   | 9   | 9   | 6   | Cap E 10 $\mu$ f 25V      | C5,C8,C10,<br>C18,C19,C23,<br>C24,C26,C31 |
| 2        | 150-0092 | 1          | 1   | 1   | 1   | 1   | Cap E 100 $\mu$ f 25V     | C17                                       |
| 3        | 150-0095 | 1          | 1   | 1   | 1   | 1   | Cap E 3300 $\mu$ f 25V    | C30                                       |
| 4        | 150-0096 | 3          | 3   | 3   | 3   | 3   | Cap E 6800 $\mu$ f 16V    | C32-C-34                                  |
| 5        | 150-0097 | 4          | 4   | 4   | 4   | 2   | Cap E 4700 $\mu$ f 25V    | C15,C16,C27,<br>C28                       |
| 6        | 151-0002 | 1          | 1   | 1   | 1   | -   | Cap CER 100 $\mu$ f 50V   | C9  |
| 7        | 151-0007 | 1          | 1   | 1   | 1   | 1   | Cap CER .005 $\mu$ f 100V | C20                                       |
| 8        | 151-0011 | 4          | 4   | 4   | 4   | 4   | Cap CER .01 $\mu$ f 50V   | C21,C22,C25,<br>C29                       |
| 9        | 151-0012 | 3          | 3   | 3   | 3   | -   | Cap CER .1 $\mu$ f 50V    | C2,C13,C14                                |
| 10       | 151-0021 | 1          | 1   | 1   | 1   | -   | Cap CER 20 pf 50V         | C7  |
| 11       | 170-0222 | 1          | 1   | 1   | 1   | 1   | P.C. Board                |   |
| 12       | 212-0020 | 2          | 2   | 2   | 2   | 2   | Conn M 10 Pin RTA         |   |
| 13       | 212-0081 | 2          | 2   | 2   | 2   | -   | Conn M 4 Pin RTA          |   |
| 14       | 313-0001 | 1          | 1   | 1   | 1   | 1   | IC LM723 Dip              | U1  |
| 15       | 471-0011 | 1          | 1   | 1   | 1   | -   | RES 10 OHM 1/2W 5%        | R2  |
| 16       | 471-0101 | 1          | 1   | 1   | 1   | 1   | RES 100 OHM 1/2W 5%       | R32                                       |
| 17       | 471-0102 | 3          | 3   | 3   | 3   | 2   | RES 1K OHM 1/2W 5%        | R10,R27,R29                               |
| 18       | 471-0103 | 2          | 2   | 2   | 2   | 1   | RES 10K OHM 1/2W 5%       | R6,R30                                    |
| 19       | 471-0104 | 1          | 1   | 1   | 1   | 1   | RES 100K OHM 1/2W 5%      | R23                                       |
| 20       | 471-0222 | 2          | 2   | 2   | 2   | -   | RES 2.2K OHM 1/2W 5%      | R21,R22                                   |
| 21       | 471-0223 | 2          | 2   | 2   | 2   | -   | RES 22K OHM 1/2W 5%       | R5,R9                                     |
| 22       | 471-0332 | 1          | 1   | 1   | 1   | 1   | RES 3.3K OHM 1/2W 5%      | R28                                       |
| 23       | 471-0182 | 1          | 1   | 1   | 1   | 1   | RES 1.8K OHM 1/2W 5%      | R26                                       |
| 24       | 471-0681 | 1          | 1   | 1   | 1   | -   | RES 680 OHM 1/2W 5%       | R7  |
| 25       | 473-05R0 | 1          | 1   | 1   | 1   | 1   | RES .05 OHM 5W 3%         | R25                                       |

## G-80 POWER SUPPLY P.C. ASSEMBLY

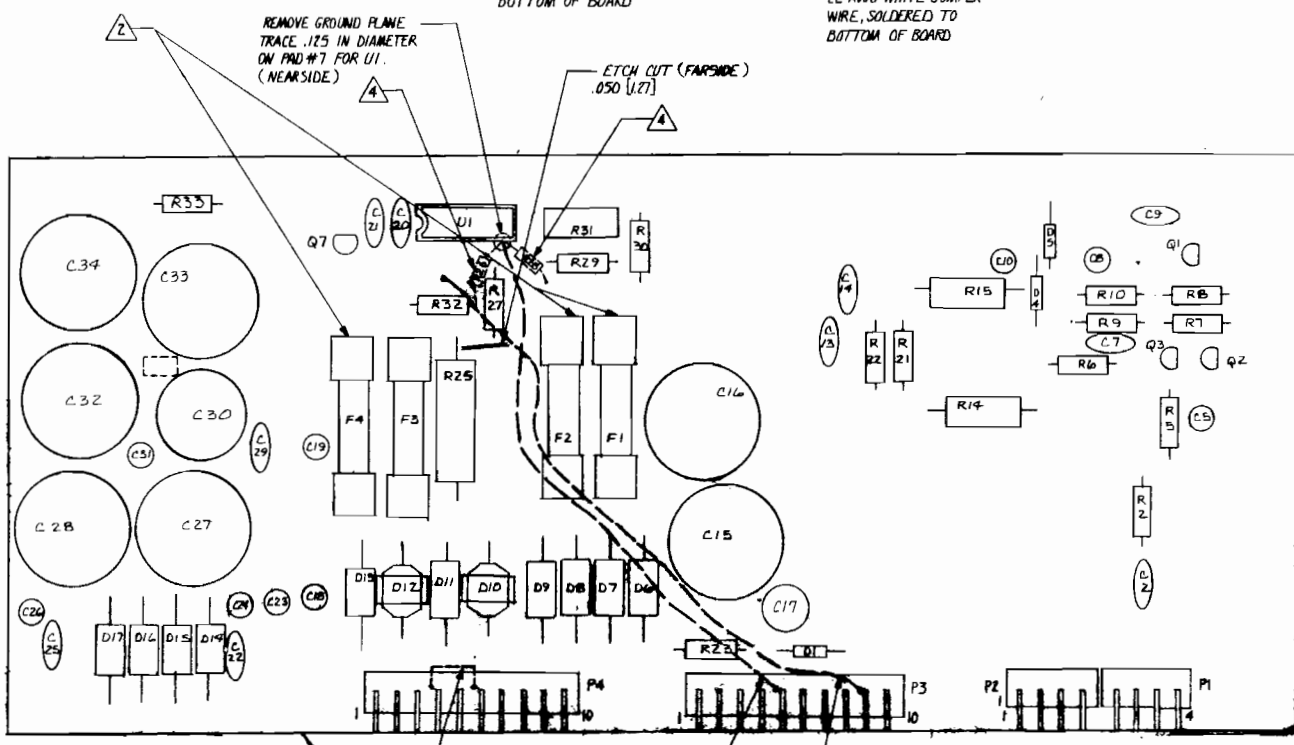
DRAWING NUMBER 800-0170

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>QTY. REQD.</u> |    |     |     | <u>DESCRIPTION</u>                      | <u>REF DES.</u>        |
|-----------------|-----------------|-------------------|----|-----|-----|---|------------------------|
| 26              | 473-00R2        | 2                 | 2  | 2   | 2   | - RES .2 OHM 3W 5%                      | R14,R15                |
| 27              | 475-0004        | 1                 | 1  | 1   | 1   | 1 POT 1K Car PCMTV                      | R31                    |
| 28              | 481-0002        | 2                 | 2  | 2   | 2   | 2 Diode MR751                           | D10,D12                |
| 29              | 481-0004        | 10                | 10 | 10  | 10  | 6 Diode MR501                           | D6-D-9,D11,<br>D13-D17 |
| 30              | 481-0006        | 3                 | 3  | 3   | 3   | 1 Diode IN914/IN4148                    | D1,D4,D5               |
| 31              | 482-0006        | 2                 | 2  | 2   | 2   | 1 XSTR 2N4403                           | Q1,Q7                  |
| 32              | 482-0014        | 2                 | 2  | 2   | 2   | - XSTR 2N4401                           | Q2,Q3                  |
| 33              | 514-0002        | 2                 | -  | 2   | -   | - Fuse 3A Norm.                         | F1,F2                  |
| 34              | 514-0003        | 8                 | 8  | 8   | 8   | 4 Clip Fuse MTG                         |                        |
| 35              | 514-0001-00     | 1                 | -  | 1   | -   | 1 Fuse 2A Slow Blow                     | F4                     |
| 36              | 514-0073        | 1                 | 1  | 1   | 1   | 1 Fuse 15A Slow Blow                    | F3                     |
| 37              | 600-0092-49     | -                 | -  | .5' | .5' | .5' Wire, 22 AWG White                  |                        |
| 38              | 600-0092-50     | -                 | -  | .5' | .5' | .5' Wire, 22 AWG Black                  |                        |
| 39              | 600-0094-04     | -                 | -  | 1   | 1   | 1 Wire, 22 AWG Solid<br>Bus Uninsulated |                        |
| 40              | 471-0220        | 1                 | 1  | 1   | 1   | - RES 22 OHM 1/2W 5%                    | R8                     |
| 41              | 471-0221        | 1                 | 1  | 1   | 1   | 1 RES 220 OHM 1/2W 5%                   | R33                    |
| 42              | 213-0003-00     | -                 | -  | 1   | 1   | 1 Socket 14 Pin<br>Socket               | V1                     |





-04 ASSY



-02 AND -03 ASSY



# Schematics



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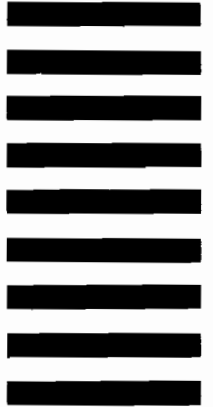
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